

November 1920

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THE NATIONAL BUSINESS



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The attitude of the next administration
toward the business man
Senator Harding Governor Cox



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Farm implements

Rubber products

Screw machine products

Locomotive works

Blast furnaces

Cork products

Small hardware

The booklet, "St. Louis as a Manufacturing Center," gives details that will interest you. A letter will bring it if addressed to

New Industries Bureau

St. Louis Chamber of Commerce

St. Louis, U. S. A.

**"Nothing great was
ever achieved with-
out enthusiasm"**

—Emerson

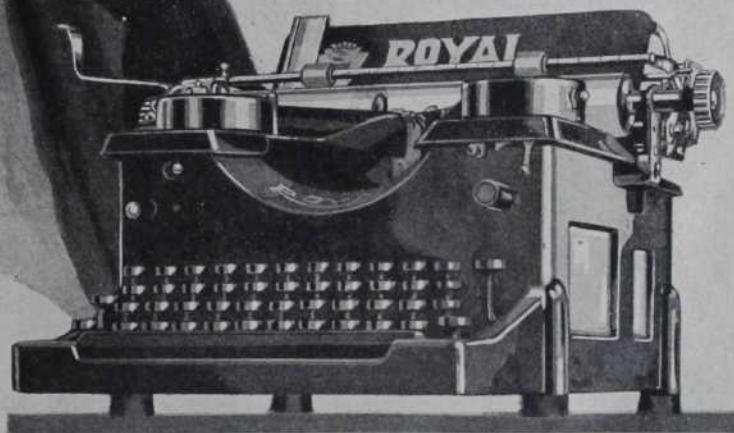
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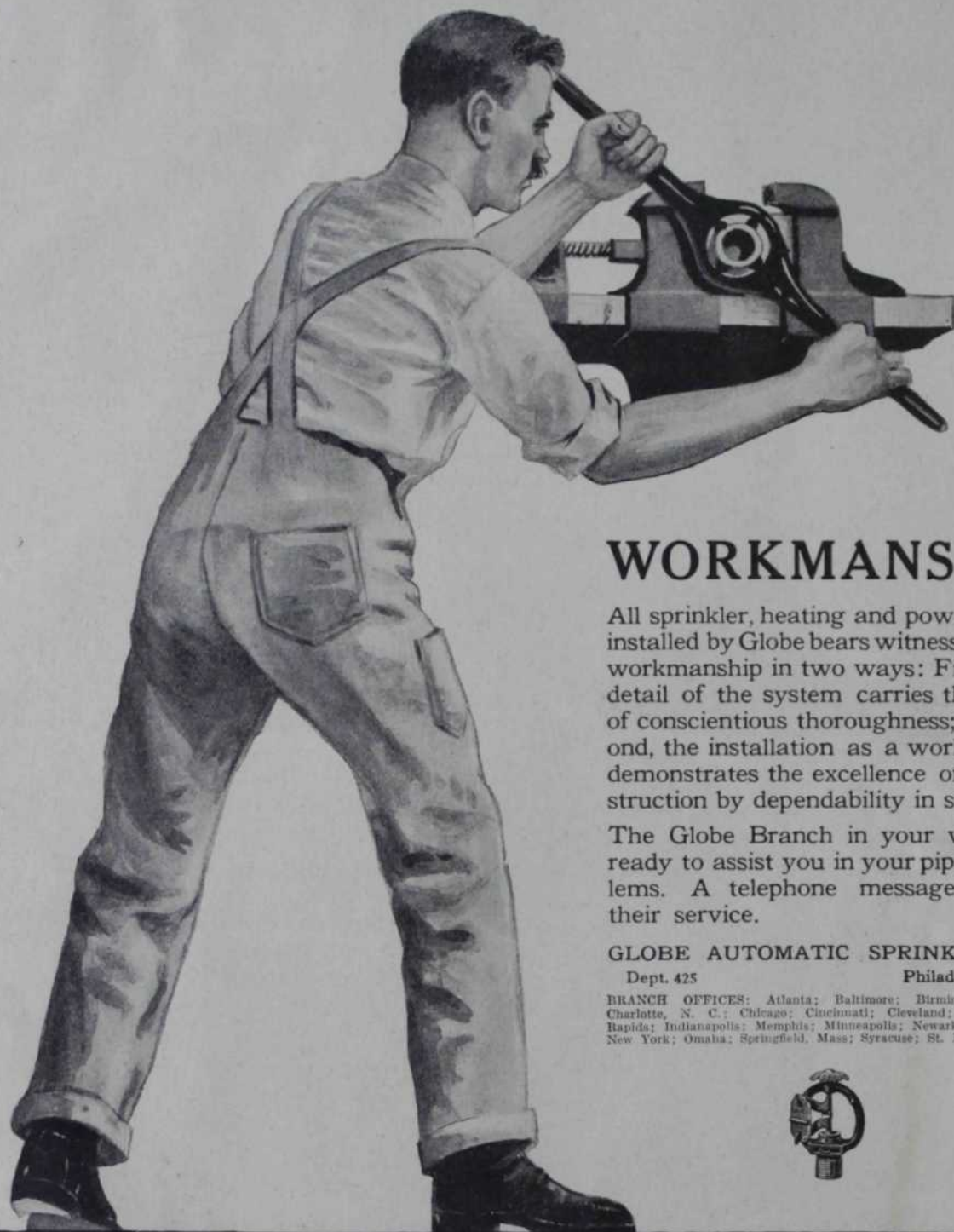


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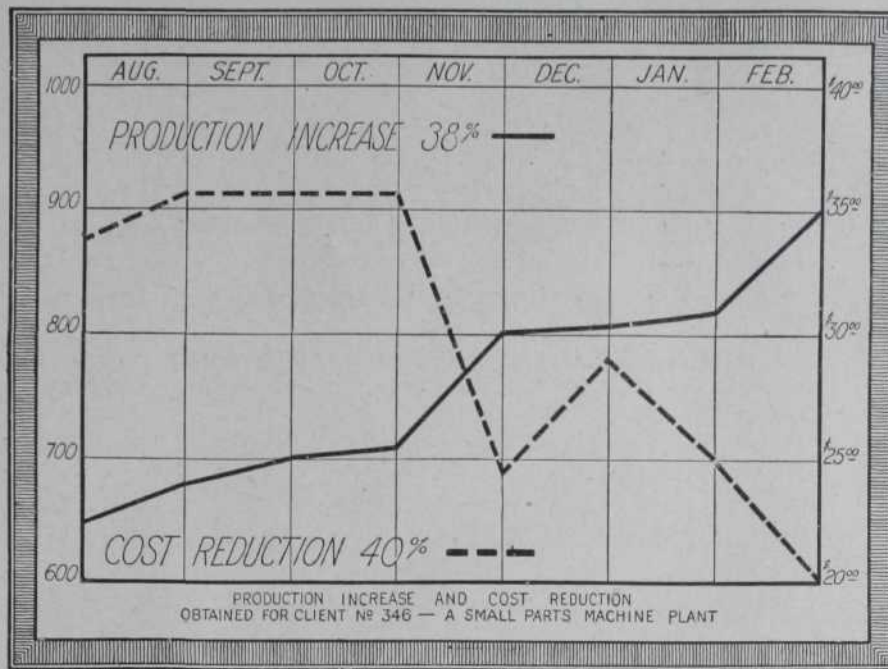
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INDUSTRIAL RELATIONS

For Higher Standards of Business Management

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Prices are going down!
Prices will go down further!

When your prices are affected how will you equalize the reduction?

- 1st. By cutting down your organization haphazardly with danger of finding later that valuable men have been eliminated, resulting in subsequent disorganization, or—
- 2nd. By cutting wages, creating dissatisfaction among workers and resulting in further reduction in production, or—
- 3rd. By cutting burden arbitrarily without a careful analysis and knowledge of effect on future activities, or—
- 4th. By cutting prices to meet competition for want of knowledge regarding true costs and just how far you can go; also encouraging price-cutting competition with heavy losses logically following?

or

Are you organized and prepared to equalize this reduction?

- 1st. By carefully reorganizing your personnel so that each member functions properly and concentrates on the needed increase in production per hour to make up for lower prices, or—
- 2nd. By establishment of standard hourly production rates to indicate how production must be maintained or increased per hour in order to maintain wage scales with good control established, or—
- 3rd. By carefully analyzing burden into departments and classifications so as to keep all necessary items down to a minimum, eliminating all unnecessary items, or—
- 4th. By having a true knowledge of all items of cost, maintain prices on a basis which will not result in losses, eliminating all unprofitable lines?

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Industrial Engineers

"Knoepfel Organized Service"

52 Vanderbilt Avenue

New York

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Vol. 8

THE NATION'S BUSINESS

No. 11

Published Monthly by the Chamber of Commerce of the United States, Washington, D. C.

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As the official magazine of the National Chamber, this publication carries authoritative notices and articles in regard to the activities of the Chamber. But in all other respects, the Chamber is not responsible for the contents of the article or for the opinion to which expression is given.



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*What a satisfaction it is to find a man who can
talk interestingly and helpfully about yours?*

ALL thru the week you are besieged with men who want to use *your* time to *their* advantage. They have many reasons why you should do something that will be of service to them.

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You welcome such a friend; no man can have too many. Hence we feel a satisfaction in being able to add a man of that kind to your acquaintance.

We would like to have you meet and know the representative of the Alexander Hamilton Institute in your vicinity.

As a lawyer becomes a better counselor day by day thru his experience with the problems of each new client, so the Institute man grows in value to his friends, as man after man discusses frankly with him the special problems and opportunities of *his own* life and business.

And the Institute man is able to point out that the reason so many business ventures fail is because the men at the head have been departmental men and know only their own part in the problem of successful organization.

Selling, accounting, corporation finance, factory and office management, transportation, advertising, merchandising—each of these is a link in the chain. And many a chain that is otherwise strong breaks because one link is weak.

The representative of the Institute never intrudes; he never attempts to exert pressure. Every day applications



750 business conferences a day

Day in and day out the representatives of the Institute are in personal conference with at least 750 business men in every sort of business.

Men confide in them problems that ordinarily would not be discussed outside the family circle.

"I have been five years in this job and seem to make no progress," one will say. "What would you do in a situation like mine?"

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for enrolment in the Modern Business Course and Service are refused to men who, in the opinion of the Institute's representative, are not equipped to profit by it.

You cannot impose on him

Among all the business men in your vicinity the Institute man is unique in this—he can only succeed as you are more successful. He literally has no interests that are apart from your interests.

He has at his command all the research facilities of the Institute. Do not hesitate to call on him for any reasonable service. He represents an institution that owes its whole growth and prosperity to the growth and prosperity of the thousands of men whom it has enrolled.

You have probably read some of the many advertisements of the Alexander Hamilton Institute in the leading magazines; and

perhaps you have heard, thru acquaintances, of the Institute representatives and their willingness to serve. But do you know what it is these men represent? Have you ever asked yourself, "What is the Alexander Hamilton Institute—what will it do for me?"

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2 owners have invested over	\$2,000,000
4 owners have invested between	1,000,000 and \$2,000,000
5 owners have invested between	500,000 and 1,000,000
22 owners have invested between	250,000 and 500,000
82 owners have invested between	100,000 and 250,000

Experienced truck users *know* truck value in terms of earning power, through actual performance of one truck against another.

They *know* that White Trucks do the most work for the least money, and they back that knowledge by increasing their investments year after year.

The purchaser of one or a few trucks can safely follow their example.

THE WHITE COMPANY
CLEVELAND

THE NATION'S BUSINESS

A Magazine for

Business Men

VOLUME 8, NUMBER 11

NOVEMBER, 1920

From the Next President—

Here are messages from the principal candidates for the presidency, in which they set forth their views of what the attitude of the government toward business should be

WE ASKED the Republican and Democratic candidates for the presidency to present to the American business man through **THE NATION'S BUSINESS** their views upon the relations and obligations of government to industry. Both of them responded. The two messages below might almost be called pre-

inaugural addresses. Unless something very unusual happens, either Senator Harding or Governor Cox will become President on March 4 next. By reading what they have to say here, the business man can get a pretty fair idea of what policy the next administration will adopt toward his problems.—**THE EDITOR.**

CIVILIZATION is based on commerce, and the protection of commerce is one of the functions of government.

Artificially to stimulate production and the interchange of commodities through the erection of tariff barriers is to pervert this function. To that kind of "protection" I am unalterably opposed because I believe it to be unfair and economically unsound. But there are other means of protection no less important and wholly unobjectionable: I refer to the guarantee of fair play at home and abroad, a free field of competition unobstructed by monopoly, and equality of opportunity during the period of industrial expansion now opening before us.

American business men are vitally interested in the economic readjustment of the world. They are interested in the creation of wide markets for their goods. Their best interests and their prosperity will be conserved if it is possible for them to exchange their surplusage of commodities promptly and in safety for the products of other nations, the products of other peoples. There cannot be an adequate economic readjustment in this country until things are properly knit together in other parts of the world.

I am sure, with the utmost certitude there is in me, that we cannot achieve that condition until the League of Nations is in full working order, and I cannot refrain from saying so, even though it is no part of my intention to make this a political document. The editor of **THE NATION'S BUSINESS** has asked me for a message to the American business public and I feel that such a message would be incomplete and ineffectual were no reference made to the very keystone of our future prosperity in foreign trade relations.

There came to my notice not long since a concrete illustration of our intimate commercial interrelation with other parts of the

America's Present Opportunity

By **JAMES M. COX**

world. I happened to be down in southwestern Kentucky, in what is known as the black burley tobacco district. The local market is Mayfield, Kentucky, but the most of that tobacco is consumed in Italy. At the time I was there, the price was about one-third what it had been the year before. The reason was not far to seek. Unsettled conditions in the Italian market and the deplorable disorganization of foreign exchange were responsible. To remedy these conditions is a governmental obligation.

The period of financial reconstruction now upon us must bring increasing demands for our minerals, our crops and the products of our labor. We have just become the second maritime nation of the world, thanks to the enormous merchant marine created out of the travail of war. We have the ships to meet these trade demands, and I am heartily in favor of maintaining our present position—more than that, of improving it at every practicable opportunity. But our facilities for the international exchange of commodities are limited. Before the war England and Germany made great headway in the markets of the world because they had adequate foreign banking facilities, and I believe that American business men should have the advantage of similar agencies by giving the Federal Reserve Act such elasticity as will permit the establishment of branch banks of the system in foreign trade centers.

American business men owe it to this government to play fair with one another and with their customers abroad. If they fail in that, then it will be time for the government to discipline them. American-made goods have long held a high place in the world's markets because they have been

honest goods, sold at a fair price. American sewing machines and electric fans, American locomotives and automobiles, American harvesters and ploughs, American steel and aluminum, American fertilizers and cotton goods, are as well known in some far corners of the earth as the stars and stripes, which almost disappeared from the Seven Seas during the protracted neglect of our merchant marine.

In a certain sense these products are as true a symbol of our country as the flag itself. To thousands of men of all races American goods mean America. The Chinese coolie shops at night by the light of a kerosene lamp made in America and filled from American wells. Trains cross the South American pampas on steel rails forged in American mills. Europe eats our bread, and the Chrysanthemum banner of Japan floats from the palace of the Mikado on a flagstaff cut from an American forest.

Trade Marks as Ambassadors

AMERICAN products represent us in little hamlets where no American consul may ever be stationed. They have added billions of dollars to our national wealth; they have increased the comfort and material welfare of every American citizen; they have enhanced the prestige of the United States in every clime. They are our inanimate ambassadors.

As time goes on these silent messengers will multiply. It seems to me they ought to receive our special consideration. We have profited through them; we ought to be proud of them, jealous of them, careful lest their good name be tarnished. Their success has been fairly won in open competition on their merits. We should safeguard their reputation as a valuable national asset.

For many years, I am told, the government of Portugal has forbidden the importation

into that country of any cottonseed oil not previously denatured to make it inedible. This has been done to prevent unscrupulous men from adulterating Portuguese olive oil. Upon the purity and unimpaired quality of this, one of Portugal's great natural products, depends the success of a big national industry. Precautions are taken to protect the reputation of their business, to safeguard its profit. The good name of Portuguese olive oil is kept untarnished.

Now, that is an attitude on the part of a government toward an important industry that I like. It does not smack of paternalism. It does not subsidize the industry. It does not create a special privilege. It does not restrict the Portuguese pressers of olive oil, nor does it increase the price of the product to the consumer. It merely guarantees fair play for the honest manufacturer. It protects him against the unscrupulous. It is just and economically sound.

Which Road ?

THE attitude of our own government toward business should be just and economically sound. During the last five years there has been an enormous stimulation of our industrial life. This happened to come at a crucial moment, just when we had passed the point when the first duty of capital was to the development of our natural resources. We had reached a fork in the road where part of our resources might advantageously be routed into foreign trade, while the remainder was kept at work in the home field.

As though especially provided to meet the expanded capacities of our producing agencies, eleven million gross tons of shipping were thrown upon the oceans to bear our commodities into alien ports. And by the same providence, by the same chain of circumstances, there arose in a multitude of markets a demand for American goods. Here was a way to stabilize the consumption of our output; a way to offset seasonal fallings-off in the domestic need; a way to take up the slack in our industrial machinery. It behooves us to see that American business has every opportunity to make the most it honestly can of this unprecedented situation.

American manufacturers have entered new fields. They are producing many commodities unknown to our laboratories and mills and factories before the war. The explosives and dyestuffs section of our great chemical industry may be mentioned as a fair example. I am told that in five years American chemists have made as much progress as the foremost chemical nation had made in the forty years preceding. American dye manufacturers are now exporting more dyes than we imported in 1914. We may well be proud of these scientific and commercial achievements.

What is true of new American dyes is true of many other American-made products. More and more our manufacturers are sending their goods into the export markets, and we shall have additional reasons to be proud as additional resources are developed and as our agencies of production expand. We must safeguard their interests, then, not by coddling them, but by guaranteeing to them fair play and a fair field at home as well as abroad.

We cannot hope for a fair business field at home unless we have tax readjustment. In

the emergency of war an excess profits tax was not only justified by the unprecedented demands upon our treasury, but was in accordance with the fundamental principle by which the contribution for governmental

Successively this has been done by the manufacturer, the jobber, the distributor, the retailer; and the consequence has been that the final purchaser has paid the tax in an augmented or multiplied form.

To speak of this process as pyramiding conveys an inaccurate impression unless you either regard the pyramid as inverted or the unfortunate consumer as groaning underneath its base. The result was apparent at the outset, but the people bore their excessive burden with fortitude and good cheer so long as their country was at war and their soldiers under arms. As soon as the arms were grounded the burden should have been lifted; and I cannot refrain even here from condemning the Republican party, which controlled Congress at that time, for its spineless political expedient of refusing to effect the required tax readjustment.

As a substitute for the excess profits tax I strongly favor a small tax on business turnovers. It will require approximately four billions of dollars annually to meet our sinking fund installments, interest charges and departmental expenses; and I estimate that about half this sum could be derived from a tax of not more than one and one-half per cent on the total volume of business done by large going concerns. From such a levy the wages paid to laborers, incomes of salaried and professional men, and receipts from agriculture and small businesses ought properly to be exempt. Units of larger capital can bear it without inconvenience and to restrict it to them would facilitate its collection.

Just Taxation Is Difficult

THIS tax, too, must be borne by the consumer, as must all taxes levied upon commodities; but it has the distinct advantage, in my opinion, of being paid but once. That is to say, it will not reach the consumer multiplied or even greatly enlarged. There are certain difficulties apparent in an equitable enforcement, but none of them is insuperable; and undoubtedly it would make possible the elimination of the burdensome excess profits tax, the occasion for which has passed. Moreover, we would encourage thus the re-entry into the channels of business of capital now withdrawn for investment in non-taxable (and non-productive) securities.

Hand in hand with this readjustment should go a revision of the taxes on personal and corporate income. The incomes from war-bred fortunes, those of the profiteer and the non-producer, and those derived from industries which flourish by reason of special unfair privileges, should stand at a high mark; but taxes on the smaller earnings of workingmen and the professional classes should be appreciably decreased.

In this connection it may not be amiss to express the disfavor in which I hold a federal inheritance tax. The processes by which property passes from generation to generation are guarded by the state and the smaller units within it, and are made possible through the functions of those agencies. The federal authority has nothing to do with them, and ought not properly to exact any compensation when they are accomplished. This source of revenue should be restricted to the state.

But if an equitable revision of taxation is essential, justice and common sense demand



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The Republican candidate seeking relief from his campaign worries by pitching horseshoes.

support and protection is apportioned as nearly as possible in accordance with benefits received. It was eminently just that those whose profits were swollen by the ghastly business of war should pay more toward financing it than those who derived no gain from it. But that emergency is past. The tax justified then is not needed now. It should have been terminated as soon as was reasonably possible after the armistice was signed. Its continuance has worked a grave hardship upon the public.

In effect this tax has been cumulative. It has been paid by the consumer, and he has paid much more than the government received.

Every business establishment, in setting its selling price, has calculated a fair profit and has added to that a liberal margin out of which to meet the excess profits impost.

no less urgently that the government's requirements in this direction be sealed down through the establishment of a national budget. The readers of this magazine are men of affairs, and I do not consider it necessary to set forth at length to such an audience the advantages of putting our governmental administration on a business basis. That it has not been done sooner is a reflection upon the world's greatest business nation. The subject has loomed large for years in expert and lay thought, and it became vital to me when, as a member of the Committee on Appropriations in Congress, I saw the slovenly, capricious and wasteful manner in which millions of dollars were apportioned to departments.

One of my first duties as Governor of Ohio was to insist upon a reorganization of the state's fiscal methods. A budget system was adopted in 1913, and it has resulted not only in a great simplification of finances but in the saving of millions of dollars annually. That is an earnest of what might be accomplished for the taxpayer if the system were established at the National Capital.

As it is now, appropriations are made without regard to the amount of revenue forthcoming and without special knowledge of the requirements which must be met. No great business enterprise could escape bankruptcy if it were conducted on such a basis. That our government has muddled through it is due primarily to the fact that it is inordinately rich and that taxpayers are not so exacting in demanding a return on their outlay as our stockholders. Morally they are much more obligated to scrutinize the business conduct of their government than the operations of concerns in which they are partners or investors, but apparently they are only now beginning to awaken to that fact.

A national budget system could be made to show results at once, and would begin to function with full effect just as soon as certain research could be completed and the cooperation of all the governmental departments procured. The results would be proportionate to the integrity and executive ability of those directing the new order. I believe public opinion already aroused to a point which guarantees the success of the system. Had the people not been clamant

for the reform, the grudging and reluctant Sixty-sixth Congress would not have amended its budget bill to meet the objections of the President, who had been obliged to return it after its first passage because of constitutional defects and certain provisions clearly dictated by considerations of political patronage. That the Senate adjourned without passing the amended bill only goes to show that the Senate was, as usual, less amenable than the House to the dictates of its constituents.

Emil Faguet, a learned and witty Frenchman, once wrote a book deriding democracy as "the cult of incompetence." That the foremost republic of the earth is now blundering along under an unsound system of taxation

and wastefully inefficient fiscal methods might seem at first glance almost a justification of his cynical charge; but the defects of democracy are its virtues in this, that they tend always to correct themselves. People who organize for self control will see to it finally that the control is competent and efficient. The majority is always right in the long run, and if it errs for a time soon rights itself. Public opinion is a prophylactic.

And I am wholly confident that, although we may have tolerated incompetence in fiscal administration and reluctance to effect needed tax readjustment, the electorate will express its opinion effectively ere long. I, for my part, invite the decision.

Business Sense in Government

By WARREN G. HARDING

THE BUSINESS of America is the business of everybody in America. This is essentially a business country. We hear a vast deal about "big business," but the big business of America is nothing but the aggregate of the small businesses. That is why we need business sense in charge of American administration, and why the majority of America has for more than half a century been a Republican majority.

The Republican party has demonstrated a superior understanding of the workaday problems of articulating the business world. Those problems are not as a rule very spectacular. They do not greatly attract the interest of academicians and theorists. They are looked upon as pretty sordid by folks who would like to engage at once in a Utopian reorganization of society, or in the idealization of our social conditions. But they are nevertheless intensely practical and absorbing,

because they touch all the people all the time.

It is true that some people believe present conditions in the world are so bad

that it would be better to scrap everything and, out of the resulting industrial and economic chaos, attempt to re-crystallize the community, hoping to produce something perfect. I am not one of those, and I do not believe their number is large enough to be a serious factor in the community.

Right here, it seems worth while to say a cheerful word about the essential strength and staying quality that our present-day structure of society has displayed since 1914. Everybody will remember that when the war broke out it was a well-nigh universal observation that "the war cannot last more than six months or a year, because economic exhaustion will starve it to death." That was the sincere opinion of a majority of people who were supposed to be wisest. Economists and experts solemnly assured us that neither the financial, the transportation, the industrial nor the agricultural resources of the world could carry on while bearing the huge burden of waste that the war involved.

Yet, instead of ending in six months or a year, the war lasted four years and a quarter, the rate of economic waste was immeasurably larger during most of that period than, at the beginning, anybody had imagined it might be; yet, as a whole, the world came out of the struggle with its social organization intact, and prepared to take up the huge tasks of debt-paying and reorganization.

In a very few years we will all look back to this period of ferment and unrest which has followed the war, and



Governor Cox in action.

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smile charitably, at the predictions of avulsion, of revolution, of social collapse and economic disaster. The truth is that at no previous stage in its history has human society been so well organized to maintain itself and care for its units, human and social, under a terrific strain, as in this epoch. Bad as conditions indubitably are in many parts of Europe, they are not comparable to those which prevailed after the Thirty Years' War or the Napoleonic era. Whoever wishes reassurance for today and tomorrow has need only to go back and study the history of yesterday and the day before.

It is only a short year since we were being told from all directions that "unless the world gets back to the serious business of production and saving, everything is going to the bow-wows."

Well, the truth is that in that short year the world has very largely got back to production and saving. The domestic production and foreign trade of Great Britain, France, Italy, Germany and our own country, all prove this. The very fact that we are not exporting so much is an evidence that other countries are requiring less importing; that is, that they are rapidly moving toward re-establishment of their normal balance of production and consumption. That is a healthy sign for them, and therefore for us, despite that it involves some difficult problems in readjusting our own economic balances.

We Carried Our Burden

THE war added hugely to the wealth and also to the debt of our country. Down to the entry of our own country as a combatant we were profiteering vastly by the misfortunes of Europe. Then came our time to carry the burden, and we carried it splendidly. But at the end we were still far better postured than any other great state, and our recovery ought to have been at a pace far outstripping theirs.

The fact that in the first two months of the present fiscal year—the months of July and August, 1920—our national expenditures exceeded the national receipts by \$125,000,000, is the conclusive testimony of an ineptness and incapacity for administration that, had it been paralleled in the governments of countries less fortunately situated than our own, would have meant the bankruptcy of their civilization.

It will amaze many, even of usually well-informed people, to know that we are starting on the new fiscal year with a deficit accumulating at such a rate that, if continued, will add three-quarters of a billion to our national debt this year. There has been so much of mis-representation and juggling with the figures about our financial situation that it is certain to bring a shock to many people to learn that we are still plunging deeper and deeper into debt all the time when we ought to have begun to curtail. Yet the Secretary of the Treasury, in offering for sale a recent series of notes, makes a statement which admits these facts.

American business, we all believe, is the best managed and organized business in the world. But American governmental business, in the period since we entered the war, has been, I think we may fairly say, the worst managed governmental business outside Russia, Germany and Austria-Hungary.

What may we hope for the future, in view of this record, if the same kind of inefficient administration should be continued in power? The Democratic nominee, who is pledged to pursue the policies of the present Administration, has been going up and down the land promising reduction of taxation. How does he propose to reduce taxes at a time when the

government debt, already above \$24,000,000,000, is increasing at a rate not far from \$1,000,000,000 a year? The Democratic Administration is leaving undone the things that are possible, and promising to do the things that are utterly impossible.

The war taught us how important it is to foster certain industries that are essential to the nation. As to these essentials—the production of those necessities of life which our country is capable of producing in sufficient supply for all of our requirements—our very national security may at any time be found to depend upon our ability to supply our needs. The war demonstrated that no country was so nearly self-contained and self-sustaining as our own; but it also showed that even in our case there is necessity for encouraging the rounded perfection of our industrial and economic equipment.

Inevitably, as other countries face the necessity of exporting more than they import in order to restore their trade balance, they will endeavor to undersell us in our own markets, and it will be necessary for us to return to the Republican policy of protection, wisely adjusted, to meet these particular conditions.

All these problems must be studied carefully and intelligently. We must encourage agriculture, because that is the basis of all industrial life. As I have said heretofore, the number of farms in America and their producing capacity are not increasing fast enough to keep the country on a self-sustaining basis as to foods and other articles of agricultural production. Therefore, we have need, through processes of reclamation and development, to increase the rate at which we are opening new farms.

Inevitably we shall find that our nation must continue a large importer, and in order that the balance of trade shall not be disastrously against us we must seek to export to new foreign markets. To that end there must be new commercial treaties and international trade agreements, whereby our business men may gain the largest possible trade expansion in the foreign field.

We will do well to keep in mind, when we hear the appeals of the present Administration for continuance in authority, that it has exercised such extraordinary war powers as have never before been conferred upon the American government. As a result of this exercise we find ourselves in a time of great inflation and recognize that there has been

persistent encouragement to dangerously radical economic thought. It is going to require the sober sense and cool-headed judgment of the whole American people to put us back on the high road of progress; and when we have accomplished that, we will be safe in putting behind the mechanism all the power and vitality of American energy and enterprise, and we may safely expect to go ahead to new and greater achievements.

We must get back to the methods of business, without the hampering restrictions and bullying methods that have been so extensively introduced. Instead of suspicion and hostility which in recent years have marked the relations between autocratic government and business, we must introduce a spirit of mutual interest, of understanding and of willingness to co-operate.

We have had more than enough of the curious theory that government and business are hostile to each other. They ought mutually to support and sustain each other. It is true, of course, that special favors to particular businesses are always to be avoided; but it is equally true that special antagonism to businesses must not be permitted. We want a fair deal for everybody and every business, and we are going to have an end to the sort of "new freedom" under which some interests have been oppressed and overtaxed, while others have been permitted to enjoy the privileges of profiteering and privateering.

The Case of Sugar

AMERICAN common sense will readily enough recognize that nothing could be more ridiculous than the appeal for continuance of a regime wherein one element of the community has been outrageously overtaxed while another has enjoyed opportunity to exact such prices as have been imposed on the great consuming public. A single illustration, which might be multiplied many times, is found in the country's experience with sugar in the past year.

The President vetoed the proposal to buy, on behalf of the government, the Cuban sugar crop of 1919-1920 because of his insistence that we must return to the "normal operation" of the law of supply and demand. So the Cuban sugar crop, which might have been bought by the government at something like six cents per pound, and furnished to the people at ten or twelve cents, was allowed to fall into the hands of speculators. The distortion of the law of supply and demand enabled them without effective governmental interference to collect two or three times a fair and reasonable price.

There is the best authority for saying the public has been mulcted of more than \$1,000,000,000 in excessive charges for sugar in the last year, absolutely without excuse or justification. That is the sort of administration we have had, and it is the sort of administration of which the country wants to be rid.

The task before us is not an easy one. The prodigalities of administration of the last few years cannot be lopped off without determined and persistent effort. Positions once created in the government service, salaries once listed on the nation's payroll, are not easily abolished. Nevertheless there must and will, if the Republican party is re-established in authority, be systematic and effective reduction of government expenses. The burden of taxation both by the government and by the profiteers will be removed from the patient shoulders of the American public just as fast as possible.



Seeing the Invisible

That is one of the roles played by the camera in a modern plant; among its recent remarkable feats is that of catching a spinning turbine wheel in a millionth of a second

By E. W. DAVIDSON

Of the General Electric Company

THE CAMERA saves American industry millions of dollars annually. A wink of its eye taken in one millionth of a second by the light from a single crack of electricity told engineers how to build turbine wheels that would stand terrific strain. A click in a laboratory workshop showing a machine and some idle scribbling on a wall helped defend a valuable patent.

The ordinary photograph preserves records, helps keep stock, is a bulwark of invention and research, aids materially in clinching sales, figures in establishing patent rights, teaches lessons of safety as they cannot be taught any other way, puts punch and pull in advertising, and helps make good citizens out of aliens in the scores of plants which conduct Americanization classes for their workers.

Imagine a line of pictures 104 miles long! That line would represent the total produced by the staff of thirty photographers and photographic workers in the headquarters plant of one American industry alone. This staff turns out an average of 10,000 blue printed photographs and about 2,000 ordinary prints every week of the year.

In this mass of pictures are innumerable photographs of practically every new machine the company makes, not to mention the thousands of views of single parts. These are used not only for sales and record purposes but also to make replacements easy and accurate. Hundreds more show ways of packing and anchoring heavy goods on cars.

Jobs That Were Too Big

PHOTOGRAPHERS who have worked for that company in the last twenty-eight years have been legion and their products have been preserved from the very first—filling a file of nearly half a million different pictures—and in all that time there have been recorded very few occasions when the photographic department has said "can't." One of these occasions was when a drawing of the control board of the Panama Canal locks measuring 65 x 6 feet was brought in to be copied. Another was the day somebody asked to have photographed a strip of paper bearing a plotted curve showing the performance of an electric locomotive. The strip was two miles long!

Frequently the experimenter in an electrical laboratory needs to see something no human eye can accurately record, so he resorts to the camera. It is by the photographic method he learns exactly what an electric arc looks like at various stages and in various atmospheres.

The camera did its part in a big electric company's research laboratory in the important work done there on steam turbine wheels. These steel discs in a turbine, catching steam at high pressure in the series of blades on their rims, revolve at 3,000 or more revolutions per minute. This produces such strains on wheels that they have to be built

with an extreme nicety of balance and toughness of material. To learn exactly what those high-speed strains are, rubber discs are revolved under varying conditions. The eye cannot fully record the evidences of strain on the rubber, nor is the fastest of camera shutters equal to it unaided.

So the job is done another way. The room is darkened, the camera set and opened and the arc is struck, thus giving the negative an exposure of approximately one millionth of a second. In that brief space even a wheel making 3,000 revolutions per minute doesn't move far.

There is such constant invention and discovery going on in the great laboratory that for years photographs were made of every work room once a month regularly. Those monthly groups of pictures were filed away. On one occasion, during the hearings before a referee on a patent case, it was necessary to establish the fact that a specialist in the

existed in that laboratory on that date. The case was won.

In a famous case some years ago a strong point was made in the successful defense of a patent worth probably more than one hundred million dollars, when it was shown that a certain typewriter had a broken staff *k* and the *r* on another was slightly smaller than average. Neither defect was noticeable with the naked eye, but the microscope detected both, and photographs of the typewriting enlarged 20 or 25 diameters helped substantiate an expert's testimony.

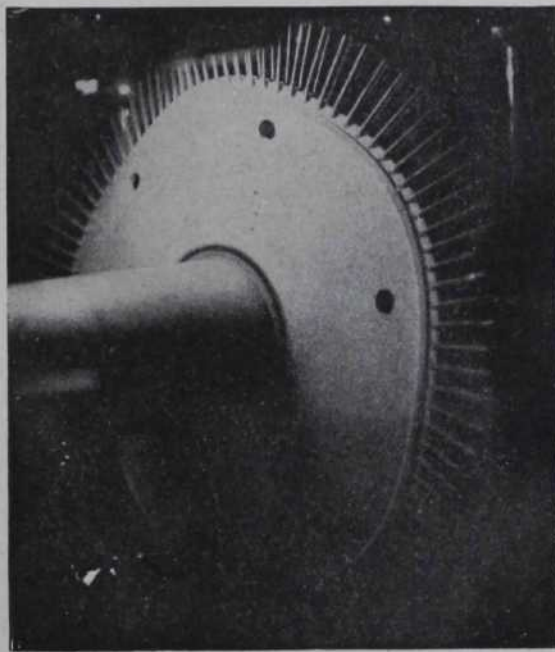
The scientist is always glad to have the camera at his elbow. Fancy photographing a tiny pleucker tube of gas as colorless and invisible as air. It is done regularly, the camera telling the scientist just what the constituent elements of that gas are and in about what relative quantities they exist. It is simply a case of passing a current of electricity through the gas and then of giving the camera a look at it through a prism which separates the colors in the spectrum thus produced. The result on the camera film is an arrangement of parallel white lines of varying intensity on a black field. Each line corresponds to one of the color lines of a spectrum and each color marks the presence of a certain element. By comparing the black and white film with a complete spectrum the scientist knows exactly what he has in his tube.

Then consider making an actual photograph of the human voice, or of the noise made by an automobile transmission gear or of the varying amount of electric current a machine or a whole factory uses from minute to minute. Or consider making a photograph of the speed a bullet travels or a photograph of the difference in time between the explosion of the two ends of a stick of dynamite—perhaps one ten-thousandth of a second.

The highly sensitive machine which can achieve these seeming impossibilities is the oscillograph, which photographs the "waves" of electricity with an ordinary camera attachment. The resultant picture of any of these things looks somewhat like the pen-and-ink jiggle of a graphic recording instrument.

The operator of an oscillograph can set the instrument so that he will know the exact length of time in fractions of a second it is going to take the machine to make an inch of jiggling line. Then in the dynamite explosion, for instance, he is able to tell the exact lapse between the burning of the two ends of the stick as registered on the machine by the breaking of wires passed through those two ends.

The speed of projectile flights is registered by the passing of the bullet through parallel sensitized screens set at measured distances so that an electric circuit is broken as it goes through each. The oscillograph connected with the screens registers these hits by peaks on the film. The operator knows the time between hits in ten thousandths of a second



This probably is the fastest picture ever taken. The exposure was one millionth of a second. An electric flash enabled the camera to see the rubber dummy of a turbine wheel as it revolved at terrific speed. Engineers used the photograph to study strains on the wheels of turbine.

laboratory had completed a device before a given date. In the search for evidence there was unearthed a photograph taken of a laboratory work bench with the device standing on it. This would not have been enough had it not been for a lead pencil "shop note" scribbled on the white wall back of the bench. The specialist had written something like this: "Moved here March 30, 1901. Where next?" This chance scribble proved that the device

by a glance at his picture and also the distance from screen to screen.

Pictures made by the oscillograph aid in studies of how to eliminate noise from automobile gears as no other device or instrument can. A telephone mouthpiece is held close to the gear. The sounds set up a vibration in the diaphragm of the transmitter just as the voice does. These vibrations send tremors through a speck of a mirror in the oscillograph. A needle of reflected light from this delicately mounted mirror registers a jiggly white line on the black background of a swiftly passing strip of film and the photograph of the noise is made.

A series of these pictures made of a gear on which various silencing schemes have been tried takes the guess work out of such experiments.

Some of the biggest American industries have begun photographing every new employee. These pictures are of service in a variety of ways, some of them strictly confidential. In a plant where physical examinations are required photographs are taken of each applicant as he is going through his examination. After he reaches his job in a shop and before he is put on the payroll his photograph is furnished to his foreman for comparison with the man himself so that there can be no possibility of a physical unfit getting a job on somebody else's physical qualifications.

Snapshooting the Employee

HE is seated, at one stage in the examination, in a chair for an optical test. The chair is in exact focus of a camera which more nearly resembles a street car fare box. While the man is intently reading "x p r z w e—" and so forth on the eye chart, an attendant presses a lever on the fare box and the applicant's face is "shot" on a band of film. Often the man's whole "history" is registered in this picture by hanging numbers back of the individual or by making checks on a chart within the picture by the use of a thermometer sort of scale. A glance at the picture tells the man's height, weight, age, etc.

These pictures are often of greater service to the man than to the company. Every day relatives of "missing" men appear at the employment offices of big plants. Their search in, say, a mile square plant of 300 buildings and 21,000 employees would be of the needle-in-the-hay-stack variety were it not for the gallery of pictures of every man and woman in the company's employ.

In war days a Department of Justice agent arrived at an employment office in a big works one morning looking for John Doe, a toolmaker about 30 years old from Hoboken. The records showed John Doe, about 30, of Hoboken to be working as a toolmaker. But before permitting the detective to enter the plant after the man, the industrial service department required that a photograph of the guilty John be produced. A comparison of it with the picture of the suspected John proved they were different men, and the toolmaker was unmolested. He has never heard to this day of his close call.

Accident prevention in practically every big plant depends in great degree upon the effective use of pictures. When a man gets

hurt or suffers from failure to make use of the employer's hospital facilities his injury frequently is photographed with his permission and the picture posted through the works as an object lesson. If an accident happens through carelessness, pictures are often made of it and posted at once so that those men who didn't see the occurrence itself can see exactly how it happened.

"The lessons of that sort of pictures go home harder than by any other method I know of, and the more frightful the picture the more accidents are prevented," declares C. L. York, in charge of safety work of a big industry. "There is a lot of objection on the part of many

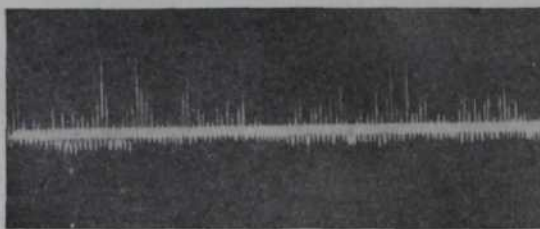
factory heads to posting a picture of a badly torn leg or an arm or face swollen out of all human form. Some won't do it. We've tried everything and we would rather give men a good nervous shock once in a while with a picture and save a few lives and legs by it than to spare their finer sensibilities."

Perhaps a picture of the United States capitol at Washington, or of a machine with its various parts labeled, or of a chart showing the course of a bill through the state legislature, does not look like a strong agency for better Americanism among the foreigners in our industries, but if you will believe A. L. Hahn, an experienced Americanization director, there are few better ones. He has been intently watching the effects of pictures on the hundreds of aliens in his classes—classes taught by shop associates of the students.

The fact that the photograph is the universal language is nowhere more apparent than here. No amount of talk can convey an impression so well as a photograph. A picture of what a beginner has done in the matter of learning to write is one of the most effective inducements to get other men into classes. "Did Tony do that? If he can I can," is their sentiment, whereupon mastering

he had to sell," recently commented J. G. Barry, an American sales manager. "Good photographs are of inestimable value to salesmen. No amount of expertly written description of machinery can tell the story as well as a high-grade photograph. The picture is of greatest value in visualizing machinery for nontechnical men, such as the average board of directors, but it also goes a long way in getting the interest of engineers."

The fact that pictures are the universal language is often brought home forcibly to salesmen who meet foreigners. On one occasion an engineer-salesman, with a million-dollar Japanese contract apparently slipping from his



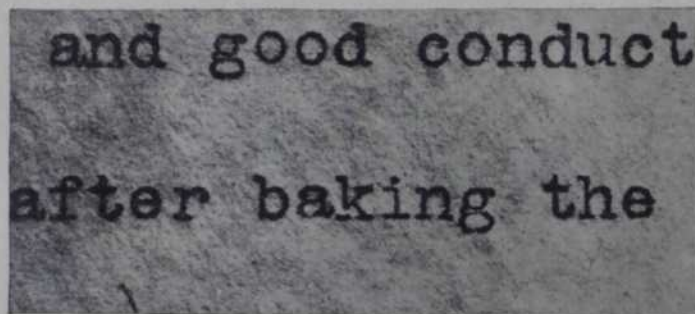
Here is a picture of the noise made by an automobile gear. The oscillograph registered it through a lens onto a film. It is possible in this way to measure time movement and sound accurately. Such pictures can gauge the difference in time between the explosions of the two ends of a stick of dynamite.

hands to a competitor, pulled out a new and complete set of photographs of the goods he was pushing and spread them on the table.

"Those Japanese engineers had been politely attentive but apathetic to a marked degree before that," he recounted. "The pictures brought them to their feet with a new sparkle in their eyes and in half an hour they had decided my way."

Men who sell electric lighting systems are fully as dependent upon pictures. "It's all right to tell a city council, for instance, what your new system would do to their streets and tell it in more glowing language than William J. Bryan used when he upset the Democratic convention," said W. D. A. Ryan, one of the country's illumination experts, "but one good photograph would put your oratory to shame. There is no one thing that counts more heavily in selling illumination than the photograph."

This doesn't mean just any sort of a photograph, however, Mr. Ryan would assure you. Taking pictures of illumination is not a simple business of setting up a camera on a street curb at night and then guessing roughly at the necessary exposure. Any good photographer can do that, but it takes an expert of long training and much knowledge of illumination to make them look exactly like the original scene without painting or "doctoring."



This microscopic photograph of typewriter letters helped a big industry win a \$100,000,000 patent suit. The broken staff of the "k" did the trick.

the English language ceases to look so impossible and they plunge in with a will.

The camera as a salesman is now a commonplace. A salesman of electrical apparatus approaching the government of Chile bidding to install a complete hydro-electric system "wouldn't think of going in without a complete set of perfect pictures of everything

Freight Brokers, Law Breakers?

THE ANTI-TRUST LAWS, both criminal and civil, are to be tested against the steamship freight brokers of New York City. The Department of Justice has alleged that the brokers' association violates the Sherman Act in that it serves as a device to monopolize for its members a large part of the business at New York in ship freight brokerage.

The Department of Justice states its conclusions about the amount of foreign trade handled through the port of New York without the intervention of brokers. It says that with two-fifths brokers have no connection, this business being handled directly by shippers or receivers of the goods.

An efficient broker such as is involved in the case is a man of many accomplishments. Acting upon behalf of the owner of goods, he obtains the freight rates, secures steamship space, pays for freight and insurance, looks out for necessary trucking and lightering, prepares bills of lading and makes out the papers required by the Customs Service.

Saner Days in the Auto Trade

A broader market for our mass production and better service by the manufacturer are two things that are really needed; restriction of credits is only a symptom

By JOHN N. WILLYS

President, Willys-Overland Company

IN 1919, while many other industries were still struggling to recover from the strain of war-time activity, the motor vehicle manufacturers of the United States turned out fourteen completed machines every working minute of a 300-day industrial year. The average value of these machines at wholesale was approximately \$1,000, while the total production of 1,974,016 cars was valued at \$1,885,112,546.

This achievement presents a record of high cost unit production which has no parallel in the manufacturing log of any other industry in all the world's history. Analyzed still further with due regard for the effect produced upon the market for a thousand raw materials and parts with the consequent influence exerted upon the productive force of all users of this unit of highway transportation, a fair picture of the chief problem of the industry in the future may be arrived at. It is:

The need for maintaining a broad market for the absorption of the mass production of the future.

The American and His Motor

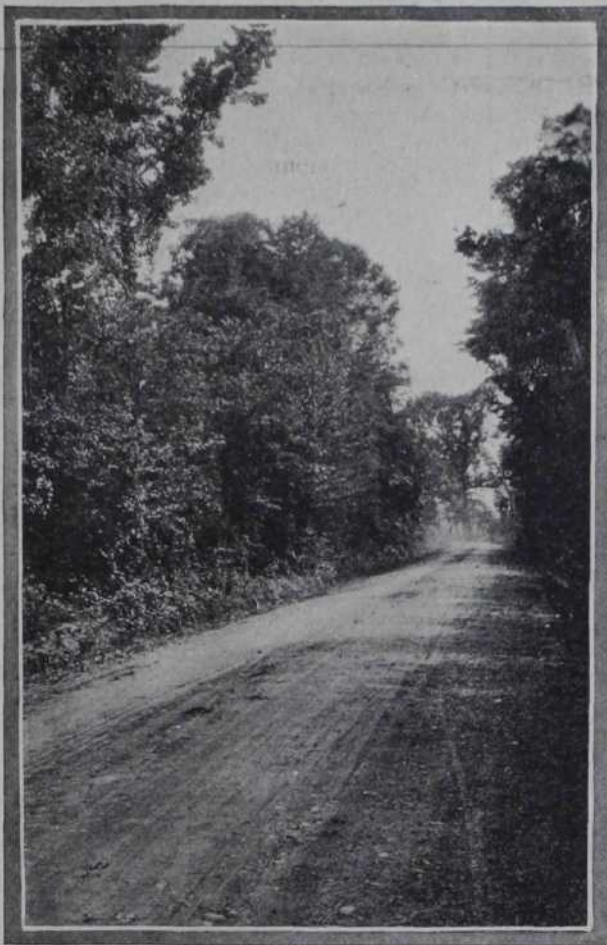
AS this article is written (September 30, 1920), reports announcing price reductions of several leading makes of automobiles may be read in any of the daily newspapers and some idea of the place which the motor car holds in the life of the American people may be gathered from the discussions of prices heard on every hand.

What has happened is a simple demonstration of the old and tried formula that the market for any commodity broadens as the price is reduced. And since the cost also declines as production increases, it follows that any modern American business man will do all in his power to arrive at this satisfactory condition.

In taking this momentous step, at a moment when the industry is approaching the quiet season of the year in sales, it must be obvious that the manufacturers are not basing their new figures upon the cost of raw materials now on hand. What they are doing, in the vernacular of Wall street, is to sell short on parts and accessories as well as on all raw materials, for it is only by a reduction in the cost elements entering into manufacturing that the new figures can be fully sustained at a legitimate profit.

How successful they will be in their attempt is indicated by announcements already made of the reduction of cotton and of certain accessories and parts, and it is reasonably safe to assume that this trend will be followed throughout the full course of the automotive industry, although it is probable that the movement will not be brought about save at a considerable loss to the manufacturer.

The vital part which the machine has come to play in our economic life assures us that the period of transition will be brief and that



Our roads will help our railroads

once accomplished it will result in a general restoration of sound business merchandising.

For those who have followed the course of the industry, however, and who have noted the significant increase of 750 per cent in the number of vehicles in the United States during the past five years, one conclusion must appear as inevitable, and in it, perhaps, we approach a second problem of the future.

The period of over-demand is closing and in its place must come an era of merchandising and of service. The cars which will find the broadest market will be those which have behind them not only the best but the cheapest service.

As one has expressed it, cars will be sold from the rear door rather than the front, and in consequence there will have to be a more efficient maintenance department which will see to it that the customer receives that courtesy and fairness to which he is entitled. The on-rushing demand of the past has kept the manufacturer employed in supplying cars alone. Now he is emerging into a more orderly period. And let it be written in passing, that he approaches it in a receptive mood. The hectic life may satisfy for a time,

but a return to normal, while it may carry with it some of the pangs which are usual in such cases, is satisfying in the long run.

As one phase, there must be a more intelligent approach to the used-car question. A more effective distribution of these units would remove them from crowded cities to farm points where the old vehicle would often be welcomed. Beyond this the public must be prepared for a closer estimate of the values in cars taken in exchange, and we may even arrive, in some instances, at the practice general in most other lines, of refusing exchange. Furnaces are not traded in, nor are most other commodities when used.

The question of raw material need not be dealt with, as it constitutes only a special problem which will vary in different lines from time to time, but which will always be susceptible of treatment.

The Need for Deflation

AS TWO symptoms of this transition period which, while temporary, are none the less unpleasant, we have with us today the financial situation and that of freight-car shortage, neither of which is peculiar to the automobile business.

Because of its huge dimensions, the automobile industry constantly requires large sums in order to carry on. The need for a deflation which brought the Federal Reserve Board to its policy of house cleaning and a generally closer scrutiny of commercial paper, has presented a problem similar to that found in the service phase of the industry and resulting from identically the same cause.

The tremendous expansion of the use of cars in the past five years naturally brought into the field thousands upon thousands of men who were in effect merely distributing agencies in many cases rather than bona fide merchants. In their rush to make rapid turnovers, many of these neglected business fundamentals, failing to build up proper credit and financial reserves. The Federal Reserve Banks, in putting their own business upon a sounder footing, very properly proceeded to chastise all those who had failed to emulate the busy ant, and in due time some in the automobile business suffered as did those in other lines and in exactly the same proportion.

With some exceptions, the legitimate dealer and the manufacturer today obtain as much credit as they ever did, but they have suffered indirectly through the sins of others, and once more it may be said that a return to normal will be welcomed.

The freight-car shortage is too widely appreciated to be dealt with at length here. THE NATION'S BUSINESS has already treated this question in its broader aspects and it is only necessary to note in passing that the automobile industry has been forced to drive

away hundreds upon thousands of cars from factory to consumer, a condition which is not only economically wrong, but which has been productive of many irritations and annoyances. No section of American industry will greet the return of the railroads to full efficiency more cordially than its brother in transportation.

This return cannot be fully accomplished, however, without a return of full efficiency on the part of our highways. The tremendous burdens imposed on the roads of the past by modern traffic have brought with them new problems in highway construction, maintenance and operation which are of vital importance to the railroads as well as to the highway unit itself, since, unless the feeder line is in condition to give a full measure of service, the main line will not receive its complement of business. The highway is as much a part of the rail system as the stub line, more so today, as it relieves the main line of a costly terminal and short-haul problem. Until our engineers have designed roads adequate to the demands of traffic, which is increasing with every year, the consumer will not obtain

the most economical transportation service.

As a corollary, it may be said advisedly that the automotive engineer could today design an even finer motor vehicle for use on the highway if that highway was efficient. Given a national system of roads, such as the higher type highways now to be found in segregated instances, it would be possible to place on the road a car which would consume much less gasoline and oil, weigh considerably less, be more comfortable for travel and even less expensive in upkeep charges than the present vehicle. Were such roads

to be found, even in a section of the United States, mass production might find a way to meet them with special designs, but obviously the car must be designed to meet practical conditions of widely varying types and character of roadways in small stretches of space.

In the forecast of standard roads we find, perhaps, the ultimate solution of the fuel problem of the day. Meanwhile, more intelligent understanding of engine operation by the general public, a wider range of oil production than we have had, more efficient methods of producing gasoline, various blended fuels and the vast oil shale deposits of the west, are the resources upon which this country may safely depend for its combustion engine needs for several years to come.

All in all, while the problems of the automobile industry call for constant thought and research in many fields, they present nothing which is impossible of solution to American mechanical, financial and distributing genius. Like any husky young infant, the industry has made mistakes and it will continue to make them, but its future is an assured one and one which holds much of great promise for the world's advancement.

INTERLOCKING industries! The brotherhood of business! These are not mere phrases. No industry can stand alone, nor is it profitable to the nation for one business to thrive on another's misfortunes. Last month THE NATION'S BUSINESS presented the chemical industry, showing the dependence of every other business upon it and its need of a better understanding on the part of the government.

This month we present a series of articles on the automotive industry, its problems, its place in our growing world trade and its right to fair treatment at the hands of the forty-two legislatures that are to meet early next year and pass upon laws affecting it.

These articles are more timely than THE NATION'S BUSINESS knew when it first planned them; since then the unexpected price cuts in and out of the industry have become a close rival to the presidential campaign in the interest of the public.—THE EDITOR.

The American Car Abroad

Having made a place for itself at home, it has set out to win its way in other markets, and some day it may help to light up even darkest Africa

By JOSHUA W. ALEXANDER

Secretary of Commerce

AS ONE GOES placidly on in the even tenor of his way he is often startled as he reflects upon conditions of today as compared with conditions of a few years ago. The young men of today, those in their early thirties, doubtless well remember the painful progress of the first automobiles in their attempts to travel the streets and highways—of the many stops for adjustments and repairs—of the wonder created not alone in the country districts but among the more sophisticated residents of the great cities as the horseless device bumped its way along.

If the automobile created excitement and wonder in this country, imagine, if you can, its effects upon the peoples of the Far Eastern countries. People who for centuries did not care to change their methods or their ways of doing things. Yet the highly perfected motor car of today is now almost as well known in some of the big cities of the Orient as it is in our own U. S. A.

The value of the motor car as the advance agent of modern civilization is truly emphasized by the action of the most conservative of all people—the Chinese—in tearing down the Great Wall, known to countless thousands of the race through several dynasties, to furnish material for the construction of up-to-date highways.

What is true in China, is true in Japan, in the heart of British North Africa, in the Straits Settlements, in all of the out-of-the-way corners of the earth. British India, Australia, New Zealand, Brazil and a score of

other countries have succumbed to the initiative of American export trade and slowly but surely the boy of Nigeria is learning to speak the same language of the car as that of the boys of Chile and Sweden.

Taking all things into consideration, the American automobile industry, in my opinion, can look with confidence to the future. Despite the export totals of today, we have as yet but scratched the surface. As the roadways of the world are improved so will the industry expand. The tomorrow of export trade may find the automobile as commonplace in Darkest Africa as it is today in some of the places which were the "Darkest Africa" of yesterday.

In the fiscal year just closed American motor vehicles, accessories and parts were exported to the seven seas to the value of \$233,252,376, a figure which gains in significance when it is known that it constitutes 8 per cent of the total value of all American exports of completely manufactured products. In the future, as foreign exchange tends to become righted and as the development of highways abroad proceeds, we may reasonably expect that this percentage will grow in volume as there is an apparent market abroad for the motor vehicle which transcends even in volume the present extent of its use in this country, now by far the world's greatest purchaser of the car.

Those who are interested in transportation movements generally find a remarkable economic influence exerted by the motor

vehicle in the development of foreign countries which is in direct contradiction to the development of this country. Here it was necessary for the government to grant subsidies to the railroads in order that the potential resources of the land might be made available for exploitation. But American development began ere the automobile was a factor, and its introduction in countries which are only now in the stage passed by this nation years ago forecasts an entirely different future for them.

Highways cost less money than railroads, the more particularly in foreign countries because they are lacking in foundries and modern manufacturing plants. Domestic labor can be used in the road building; home dirt and gravel are suitable materials for that purpose. So it happens that in many lands—and this is especially true in those countries already mentioned—highway work has suddenly become a subject of great moment, and everywhere there is beginning a movement for roads. As these are completed, motor vehicles are pressed into service for both passenger and commercial uses and as a result, a gradual development of the country is taking place which will in time develop sufficient tonnage to enable the construction of main line railroads in an economic manner and, incidentally, without short-line hauls save where these are profitable.

Of all the phases of motor vehicle export, perhaps no other is as interesting as this, and already in Japan and in Argentina we find

parallels to the many good roads associations of the United States in new organizations which are undertaking to educate the natives to the value of the highway.

The superficial observer is likely to look upon the countries of Continental Europe as the chief field for American cars and to express some surprise at the emphasis placed upon South America, Asia, and England's colonial possessions, but the fact is that to-day it is the latter countries which offer the better opportunity for the exporter.

In Uruguay alone about three times as many U. S. motor vehicles have been sold during the last six months as were disposed of in France for the same period, while Spain and Sweden may be named as the only countries of Europe which are holding their own or better in the ratings of American car exports.

The answer may be found partially, if not wholly, in the foreign exchange which has brought about prohibition of car exports in Portugal, Norway, Poland, Germany, Czechoslovakia and other European nations, and which has resulted in high tariffs in other

nations as the result of an intensive effort to right the balance of foreign exchange.

Soviet Russia is a purchaser only by license and thus far has been unable to fully utilize motor vehicle transportation because of peculiar conditions prevailing in that country. The field presented there, however, is a rich one and some day we may look forward to large exportations to this land which so much needs modern machinery and equipment.

In selling the automobile abroad, however, the American manufacturer has as many questions to confront as he has nations to deal with. Each land has its peculiarities and usages and the successful merchandiser must meet them. Thus in the Straits Settlements, for example, the natives want no machine in sedate blacks or deep blues. Vivid colors are more to their liking and they will have none else. Ceylon's laws require that the machine shall have a right hand drive, while in Norway certain types of tires for motor trucks are prescribed by law.

Differences in financial arrangements, better methods of packing, a careful selection of agents and a close restriction of territory are

among the factors which are necessary to profitable business, and the merchant who ignores them will be heavily penalized by decreasing entries on the right-hand side of the ledger.

In general, the automobile companies will do well to follow the reports of the commercial attaches of the government, who are everywhere following the trend of trade, as are the agents of the consular service, and in their reports will be found many a valuable bit of information, many an interesting sidelight on foreign trade.

From the viewpoint of international relations it is interesting to note that the automobile industry stands apart in that it is advocating a decrease instead of an increase in tariff, an action the expressed purpose of which is to aid the European manufacturers in finding a market here for their higher priced cars, thus providing for a reciprocal trade that will tend to improve the exchange situation. Its officials, too, have expressed a close interest in commercial treaties, as a possible means of furthering such reciprocal trade relations.

Five Thousand Automobile Bills

They will come before forty-two legislatures in January and the car owner's only hope is that some of them, at least, will be based on common sense

By DAVID JAMESON

President, The American Automobile Association

THE OPEN SEASON in legislation is approaching. On or about January 2d, the members of the forty-two state legislatures which meet in 1921 will begin to convene, Congress will be running along in high gear at Washington and large chunks of oratory will be cluttering the path of the several legislative machines as they proceed on their way toward new laws and statutes.

As one of the details which will face the legislator this year, consider the automobile, the motor truck and the highway. The automobile industry has many statistics which it presents to the public with a good deal of justified pride, but the statistician who found that 5,000 measures would be introduced this year referring to every known and some unknown aspects of highway transportation, didn't win any great amount of applause for his effort from a group which has production, fuel and transportation problems on its hands at the moment, not to mention a few hundred other questions of immediate concern to the gentlemen from whose pockets come the wherewithal to keep the carburetor of the country's second largest industry moving. Not by several tankfuls of gasoline and a tire or two thrown in.

The statistician was right though, for but a brief forecast of the legislation which is casting its shadow beforehand shows every kind of a measure in prospect from one which would make all machines of the same sedate finish—black—to others which would remove the gas engine from the road altogether, thus permitting the country to return to the tranquil simplicity which characterized it when a journey from one town to another was undertaken with much the same preparation as would be made now for a trip to Mars.

The reason for all of this activity is discernible enough to those familiar with the career of the automobile and certainly to all who own cars, and who have ever tried to do

much traveling out and beyond the confines of their home district. It lies, briefly, in the fact that the use of the automobile has grown so rapidly that neither science nor law (we may distinguish between the two, perhaps), nor even the producers, have been able to keep pace with the tremendous use of this new form of transportation.

It has been said that a characteristic of the American is his love of speed, and certainly he has amply demonstrated it in the rapid not to say precipitate, manner with which he has adopted the car for his own. Wherefore, and by reason of which, the 5,000 measures now proposed to cause a hasty evolution to take care of the evolving of the modern citizen on the highway.

Recently one of the leading engineers of the Bureau of Public Roads made the astounding statement in a public meeting that there is not a highway engineer in the United States who could today present a rational plan of road design. Therein appears the first and chief legislative question of moment to car users which will be considered nationally and in the halls of state legislatures this year, as well as affording themes for discussion by numerous municipalities, county commissioners, et al.

No Longer a Local Matter

TWENTY years ago our road problems were local. The vehicles passing over the highway were horse-drawn, slow and with a limited "cruising zone." Came then the motor vehicle and trailing in its wake questions of finance, impact, types and character of roads, traffic congestion and a thousand and one questions bearing upon rules and regulations governing highway transportation from first topic of how shall we finance the highway, on down. The legislatures were inundated with a flood of bills seeking to point the way to the ultimate solution, and as the year

1921 approaches they are still trying to make headway against the tide.

So serious did the situation become that everybody interested in highway transportation and that includes some 8,000,000 car owners, not to mention the 110,000,000 ultimate consumers of the nation began to get on the job. First this answer, then that, was made and discarded. The legislators wanted to be fair but frequently didn't have the facts before them (which was not their fault).

Today it is perceived that the first interest of all who make, sell and own motor vehicles is identical in that all want the best road which is to be had at the lowest possible cost. They want it to go somewhere, end somewhere, and they want it to be of the material, whatever it may be, that is best adapted to the needs of traffic in the particular locality which the road is to traverse. Since there are some 2,500,000 miles of rural highway, it is obvious that it can't all be taken care of at once, so it is suggested that the first step is for the National Government to construct and maintain the most important roads thus leaving the states free to attack their problem in a similar manner, while the county official does likewise in his jurisdiction.

As for the use of these highways, it is now pretty well recognized that the manufacturer can't build units of any size and speed he may desire, but must stay within definite limitations and such limitations have been agreed upon in conference with national and state officials. On the other hand, it is also recognized that motor transportation knows no political boundary; hence an effort is being made to bring about uniform traffic laws and uniform registration fees which will permit the man from California to travel anywhere else in the United States without a covert feeling that somehow he is breaking a law of some sort.

Further, there seems to be a gradual awak-



When it comes to building roads, Mr. Jameson says that it is the first interest of those who own and those who make automobiles to get the best road that can be had at the lowest cost,

and to see that the road shall go somewhere. There are some 2,500,000 miles of rural highway in the U. S. and it is up to our officials to see that the most important of them are improved first.

ening to the fact that a road is like any other piece of human construction, in that it will go to pieces if not cared for, so a strenuous effort is being made to have adequate maintenance funds provided with the recognition that the vehicle which does the damage should pay the cost. This, however, carries along a corollary that since the car user is being charged for the privilege of operating his machine, his money should be used in road upkeep and not diverted to other requirements of government, and particularly, these funds should not be used for construction, since when they are the road is left without funds to keep it in shape.

In other words, every one profits from road construction, whether he uses the road or not, while maintenance is obviously an added charge against those who do use it, whether with a horse-drawn vehicle or a motor.

Beyond these points there is definite need for laws which shall guide traffic in congested points, as well as safety requirements which will drive the fool from the road while protecting the careful driver from the careless pedestrian. The auto thief also is a menace and should be dealt with in stringent manner.

These perhaps are the most obvious matters in which users of cars are interested, but taxation is another which has an important bearing upon them, as it does upon everyone else in these days. The man who buys a machine doesn't mind taking his share of the load, but he doesn't want to carry all of the rest of the population with him, and movements toward further national taxation of the finished vehicle or toward heavier costs levied against his fuel, tire and accessory items generally, don't find any enthusiastic reception from him, particularly when he is already paying an estimated average annual tax of more than \$30 for the use of the car alone.

And when we consider the motor truck, the

feeling of the operator is that the vehicle should be free from all unnecessary taxation, as should other forms of transportation, simply because every tax item adds to the cost of transportation to the over-worked ultimate consumer whose name begins and ends in the letters y-o-u.

If the average motor user were asked whether he had any requests to make of the legislator beyond asking for adequate highways and adequate traffic rules, regulations and limitations, he would probably shake his head, but if he is well informed, he would add a supplemental request, which might be phrased somewhat in this way:

"Give the Bureau of Standards and the Bureau of Mines, and the Bureau of Public Roads and the Bureau of Foreign and Domestic Commerce, and any other properly designated governmental agencies which may be interested, sufficient funds to enable them to go ahead with research into highway and highway transport problems. We want cheaper gas engines, better fuel, better roads, and, as Americans with due American pride in our industries, wider foreign markets for American products. Scientific and economic research will solve our questions and save untold millions in the future."

And being, as averages go, a modest sort of an individual, the user would then leave the spotlight to see what he could do to get his for himself, that share of the treatment which he had bespoken for all of us.

England Sees a Light

STUPID and obstinate Board," "should be renamed the Board for the Destruction of Trade Interests," "This notorious department." This sounds like an American paper denouncing a commission named by an opposition president. But it is not. It's a

British paper devoted to the oil industry voicing its opinion of the Board of Trade.

It was only yesterday that we were all alarmed at the picture of Great Britain reaching out for the control of the world's oil supply. The policy of excluding aliens from any share in oil development in lands England controls has been met by legislation which would lawsuit British interests in oil leaseholds in the United States.

"It will be remembered," says *Oil News* of London, "that in response to the attitude of the British Board of Trade in excluding foreigners, even our own allies, from participation in companies formed to produce oil in the United Kingdom, the Americans introduced and passed an act excluding aliens from oil lands if such aliens come from countries from which the Americans are excluded as regards oil development. We said this would be so."

"The iniquity and stupidity of our Board of Trade is no reason why we should not raise our voice and warn British investors against taking up leasehold oil lands in the United States until the exact conditions of the tenure of the latter are known. The Board of Trade action, which resulted in the harsher clauses of the American Leasing Act, bears very hardly on honest Britishers; but the delinquency of this notorious department is no reason why we should not put people on this side on their guard against investment in oil leases in the States which may prove to be only a means of losing money or may bring quite a considerable amount of trouble in their train."

Franklin K. Lane, ex-Secretary of the Interior met the challenge not long ago when he said:

"The more of a monopoly Great Britain may have, the worse it will be for her in the end. 'Nobody loves a fat man.'"

What If Our Autos All Stopped?

Business paralysis that would follow could be compared only to the stoppage of railroads; the war on disease, the food supply, and fire prevention all hinge on the motor

By CHARLES CLIFTON

President, National Automobile Chamber of Commerce

NOT LONG AGO the writer, in an article which discussed the automobile as a productive force, propounded this question:

"In your opinion, what would be the effect upon the commercial and social fabric of the United States, if the use of all passenger automobiles should be prohibited for a period of ten days?"

The purpose of that inquiry was to bring about a consideration of the automobile as a factor in industrial and social economics but at least one of the results which came from it was not forecast. This was a Yankee-like request from the editor of THE NATION'S BUSINESS, that I answer my own question and since the subject is of interest to every American, I will try to do it with one explanation, and that is, that I have in turn placed the question before a number of men in different walks of life and in different parts of the country. No attempt will be made here to include all of the answers or even to quote the authors but much of the material will be used since the responses show that the subject is one which has not failed to leave its impress upon thinking men.

In order to arrive at a proper valuation of the motor car, it is perhaps necessary at the outset to make use of a few statistics which paint the picture of the automobile's effect upon our industrial life. This done we can then proceed to examine the question from the viewpoint of the average man in the average town.

Last year the total wholesale volume of business in motor vehicles, parts, tires and accessories was \$3,166,834,594. The value of the finished automobiles alone was \$1,015,443,338, or a sum four times the total capital of all the New York City banks and more than double the United States war loans to Belgium.

One for Every Baby

THE year's motor vehicle production of 1,974,016 cars was more than enough to give one car to every child born in the United States during the year and one to every child born in France in 1917.

More than 300,000 men are employed in the production of these vehicles alone or more than all those in the service of the United States Steel corporation and its subsidiaries. The annual pay-roll is \$374,933,856, or more by \$21,000,000 than Canada's war expenditures for 1918.

Finally, there is now one motor vehicle in service to every 13.52 persons in the United States. On a conservative basis, the 7,558,848 cars in service travelled 22,667,544,000 miles last year, which, multiplied by an average passenger rating of three to a car means a total passenger mileage of 68,002,632,000, as against the railroad mileage for the same period of 46,145,070,641. On a basis of 300 days of use and two passengers carried, automobiles carried 4,535,308,800 passengers in 1918 compared with the railroads' total of 1,124,000,000 in 1918, the latest figures available.

When it is realized that practically 88 per cent of the production and use of motor vehicles has been brought about in the past five years, it is apparent at once, that only through making more efficient all industry could such a tremendous movement in new production be accomplished without seriously dislocating all other factors entering into our economic life. Yet there briefly told is the whole story of the automobile industry.

But what of our question? The editor no doubt is becoming impatient, as even editors sometimes do, and, perhaps, even has arrived at the conclusion that I am talking around rather than at what he has asked me to say. So then—

The first reaction to our inquiry comes from a big business man in one of the largest cities of the country and in his answer we gather some idea of the part which the commercial vehicle is already playing in the industrial development of our nation.

Prohibit the use of the motor vehicle and at once you restrict our food supply to a dangerously low mark, is what he says in effect. Railroad facilities have not been increased commensurate with the growth in population and there is no likelihood that they will be.

Vegetables Motor to Town

OUR eggs, our milk, most of our garden truck is brought into the city each day via the highway and the motor vehicle. No great reserves are maintained and we suffer seriously from any interruption in this traffic.

Without the motor vehicle our terminals would be piled high with freight, and rail transportation would be impaired. Our street car service is not adequate to care for all transportation and, in consequence, our shops would be emptied, our places of amusement deserted, our factories would be forced to work on part time, if at all.

As a secondary reaction our banks would suffer and credit would begin to freeze.

Perhaps the most serious result would be that of the effect upon our health standards. In any large city the physicians are always taxed to the limit in cases of epidemic, such as the wave of influenza which spread over the country a year ago. Think of what the result would be if instead of being able to care for cases in all parts of the city, quickly and efficiently, the doctor should suddenly be thrust back upon the less elastic city street car system, forced to hire a horse and wagon, which he would have trouble in getting in this modern day, or worse, compelled to walk. Many a life would be lost which might have been saved by immediate attention, aside from those who would be affected by failure to obtain proper foods.

Since our fire departments today are largely motorized, drastic steps would of necessity have to be taken and we might easily come under a reign of martial law in the need for a commandeering of all forms of transportation.

The case for the large city closes. Suppose now we trace back the steps of such a prohibition to its effect on the sources which sup-

ply the bigger centers of population and hear the words of a man who has been interested in the problem from the standpoint of the producer:

"Much of the recent development of modern farm life in America is built upon the possession of some kind of a motor vehicle. Take it away and the question of agricultural production would become even more difficult of solution than it is now. The farmer who is tilling land twenty or thirty miles away from a railroad would find his market very greatly restricted, would be unable to take advantage of quick turns in price, as he is now, and would be compelled to employ more labor.

"These disadvantages, however, are not as great as the sociological phases of the use of the motor vehicle. His communication with the rural marketing center would be rendered so much more difficult that his family would return once more to the semi-isolation which made farm life so unpleasant in the past. Since we are trending more and more to consolidated schools situated several miles away from the student, the pupil would be absent from classes until the old little school-house could be re-established with its less satisfactory teaching conditions."

Ten days would not accomplish all these things, but they would be a long enough period to give the farmer an index of what would happen from a prohibition of highway travel.

If the farmer would be affected, what then of the small town to which he journeys of an evening when the day's work is done or where he makes headquarters for buying and selling. The part which the motor vehicle plays in the life of the small town is not easily understood, nor is it fully appreciated. The garage and tank-filling station are symbols of an industry which have a far more vital influence on the town than anyone realizes, save after a close study. First, we have the market created by the men who are employed in these establishments, who are good customers of the butcher, the baker, the electric light man. Next, we have the users of the machine, who come in from miles around to buy goods from us, to go to the "movie," to patronize our clubs, all that the town has to offer. Our hotels would lose immensely because, while we might find wagons, the travel which now makes for circulation of money would be strangled by physical limitations of the slower vehicles we would have to use.

How It Would Affect Coal

THE mines which supply us with coal from the back hills would have their costs advanced to a point where they would have to close because of competition from other centers which are more favored geographically than ours. In a word, stagnation would set in which would compel our bankers to set brakes on the wheels of progress.

But, after all, the larger city, the farm and the rural town, much as they would suffer directly, would sustain a heavier if indirect loss which would result from the blow which

would be administered to industry generally.

In the opening paragraphs of this article, I tried to show with a few figures something of the size of the automobile industry. Suppose now we trace briefly back to their sources some of the factors which enter into that final total of production, trying to see what its ramifications are and what the effect of a stoppage of the industry would be.

First of all, of course, we have steel, which is the backbone of the modern American highway unit. The sum total automobile use of steel in terms of percentage is not large (4 per cent, I think), but, expressed in quality and in total tonnage and in terms of a cash business which is maintained at a healthy level, the automobile industry has a very important bearing upon the market for this commodity.

Then there is lumber which is used in a variety of ways in car manufacture. And rubber, cotton, leather, gasoline, scores of other raw commodities which find their way into the car or into its accessories or into the plants which manufacture it, in amounts which run into millions of dollars, yes, hundreds of millions of dollars annually, all of them in the last analysis not only furnishing a market and employment for the industry directly affected but indirectly affecting the farmer, the business man, the scientist, all of us, through the broader purchasing power which they make possible.

Of course, we must not forget that, put into service, these cars at once begin to do efficient service for the user in eliminating distance and time for him, which once more speeds up his productive ability and, by lowering his

costs, broadens his market. It all makes up a complicated, economic machine, every cog of which must move smoothly if the whole is to function.

Personally, I cannot but feel that the sharp blow which was struck by the enforcement of "gasless" Sundays during the war gave ample evidence of the influence of the car. Stagnation would be inevitable if its use were prohibited and stagnation is inevitably a breeder of disease.

My experience with the editor has taught me questions are dangerous things, but after stating my conclusion I cannot resist asking one more:

No one industry, of course, can bring about the Utopia, but if I were to search the whole broad range of science and invention, I do not believe I could point to any one commercial process which has been developed in the last decade which is doing as much for the betterment of mankind, as the modern motor vehicle.

Can you?

Small Profits in Farming

THE AVERAGE middle west farm is not a place to seek a fortune. This statement is based on a study by the Department of Agriculture of 194 farms in Ohio, Indiana and Wisconsin. In Ohio and Indiana the studies covered seven years and in Wisconsin, five.

From the figures thus obtained, the farm income (receipts less expenses), and the labor income (farm income less five per cent on investment), have been computed for each farm and for each group of farms.

The average farm income of the 25 farmers visited in Washington County, Ohio, for the seven years 1912-18, was \$610; the labor income, \$276; the return on investment, 4.6 per cent. In addition to the farm income, the farmers had food, fuel and house rent, estimated to be worth, on the average, \$359 per year. For 1912 the farm income of these farms averaged \$456, and for 1918 the average was \$719.

The 100 farmers in Clinton County, Indiana, being on better land than the Ohio farmers, made a correspondingly better showing. Their farm incomes averaged \$1,856 for the seven years, 1910 and 1913-18, and their labor incomes, \$558. Return on capital was 5.7, and food, fuel, and house rent furnished by the farm, \$425. The average farm income of these farms increased from \$1,282 in 1910 to \$2,978 in 1918.

The farm income of the 60 Wisconsin farms averaged \$1,293 for the five years, 1913-18, the labor income \$408, and return on investment—determined by deducting from the farm income the value of the farmer's labor—4.7 per cent. The average farm income ranged from \$1,079 in 1913 to \$1,990 in 1918.

The department's statistical experts reach these conclusions:

That comparatively few of the farmers in the groups studied have been making large profits during the recent years of comparatively high prices.

That their average return on investment increased from about 4 per cent in 1912 to 7 per cent in 1918.

That most of them are making less than \$500 cash per year.



The automobile has had a profound effect upon the social progress of the United States. It is helping solve the farm problem by giving

the farmer and his family a means of enjoying the benefits of the towns; also it introduces city folks to the country and its people.

Mexico's Oil "Rights"

A timely presentation of the case of the men who risked life and money in developing petroleum fields, only to have the government seek their property through a legal farce

By **FREDERICK R. KELLOGG**

General Counsel of the Pan-American Petroleum Company

THE MEXICAN oil question is briefly this:

Shall any nation within whose borders American citizens have ventured their capital and their lives in the promotion of industrial enterprises be considered as having the right to take from these Americans the fruits of their enterprises, when success has been attained, without any pretense of compensation or any shadow of title other than that which physical force may furnish?

The question resolves itself into two subdivisions. In the first place, it involves a statement of the circumstances which especially concern the oil companies themselves. In the second place, it is my intention to inquire what interest Americans have in the outcome of this controversy.

First, as to the situation of the oil companies.

The commercial development of petroleum in Mexico began in 1900, when Edward L. Doheny and Charles A. Canfield acquired their first properties by purchase from private owners who had held them from the Crown of Spain by continuous chains of titles dating back three hundred years. Messrs. Doheny and Canfield were not then and never have been "concessionaires." They have never asked nor received anything from the government of Mexico. They never acquired any public lands, but continued their acquisition of properties from private owners. They were followed by other American oil companies, all of which pursued the same policy. An English company obtained a concession from the government covering a large extent of territory, but, so far as my information extends, no oil has ever since been produced from it.

They Aren't "Concessions"

THE essential point that I wish to make is that no American company has ever had an oil concession from Mexico at any time since the beginning of the commercial development of petroleum in that country.

At all times during the acquisition of these private properties the law of Mexico relative to titles to petroleum was contained in three statutes: The Law of 1884, the Law of 1892, and the Law of 1909.

All contained provisions which are substantially identical, to the effect that petroleum belonged to the owner of the surface of the lands and might be developed and dealt with by the surface owner as he saw fit without governmental license or interference.

In other words, the Republic of Mexico issued unmistakable invitations to all the world to come and invest its money, its brains and its labor in this industry.

There has never been the least doubt as to the meaning of any of these statutes, a point which is not only demonstrable by an examination of the language itself, but which was decided at a special session in 1905 of the Academy of Jurisprudence of Mexico (an association resembling the American Bar Association, and containing all of the leading jurists of Mexico among its members), at

which with only one dissenting vote it was determined that under the laws of 1884 and 1892 petroleum did not belong to the Mexican nation and could not be taken by the nation from private owners without full compensation.

In reliance upon these statutes the petroleum development progressed. A country which had been almost a trackless jungle was made into one of the greatest producers of petroleum in the world today. Enormous pipeline systems for the collection of petroleum were established. Great storage and terminal facilities were supplied. Large fleets of tank steamships were built. The sum total of all of these investments aggregate several hundred millions of dollars.

Broken Pledges

DURING the presidency of Porfirio Diaz all went well; and it was not until Carranza—the apostle of liberty—became dictator that any change in the spirit of the Mexican legislation concerning petroleum became manifest. As soon, however, as he had been recognized *de facto* by the American Government he conveniently forgot his previous pledges to respect the rights and properties of foreigners and set himself to work, together with Luis Cabrera, Minister of Finance of the Carranza administration, to concoct detailed methods of accomplishing what Mr. Cabrera had declared it was his intention to accomplish, to wit: to drive Americans out of Mexico and take over their property. In making this statement I am not indulging in generalities, for I have before me the sworn testimony as to this declaration given by a gentleman who was present at a dinner in Vera Cruz at which the declaration was made, and at which not only Cabrera but Carranza were present.

Pursuant to this plan, Carranza first took possession of the railroad systems, and since that day no security holder has received a dollar upon his securities, and all net revenues have been confiscated by the Carranza government. The Wells Fargo Company's business seemed thriving. Hence Mr. Carranza took that over. He then found that the tramway systems of the National Capital seemed to be productive and decided that they should be added to his collection. They are owned by Canadians. He learned that two of the leading banks, one controlled by English and one by French interests, had large stores of gold coin in their vaults, and, perhaps to show that his theories of liberty were not limited to the acquisition of American properties, compelled these bankers to make what he was pleased to term a "loan," and by force of arms removed all of the specie which he was able to discover. He also took over the English-owned railroad running from Vera Cruz to Mexico. As long as it earned money he kept it. Occasionally he turned it back to its owners, resuming its possession as soon as its finances showed improvement.

During all of this time his mind had been working upon the petroleum situation. How to get hold of these properties with the least

friction and the greatest effectiveness evidently gave him and Mr. Cabrera some concern. Fortunately for them, as they considered it, the World War created a situation which made it somewhat unlikely that the United States Government would be able to give much attention to any aggressions against the petroleum companies; and finally, with the aid of some of the leading German representatives in Mexico, they adopted a plan to amend the constitution so as to assert that the Mexican nation, and not the petroleum companies, owned these properties and that the nation could enforce its alleged rights to them without compensation.

As compared to this plan, let me again refer to the solemn written pledge given in October, 1915, by Carranza's accredited representative, Mr. Arredondo, to the United States Government, in which it was stated that the Carranza government—

"conscious of its international obligations and of its capability to comply with them, has offered guarantees to . . . foreigners and shall continue to see that their lives and property are respected, in accordance with the practices established by civilized nations."

As a method of carrying out this idea, Mr. Carranza convened what he was pleased to term a "Constituent Congress" for the purpose of amending the constitution. This congress was wholly unauthorized by the provisions of the then existing law and in addition Carranza, with commendable frankness, decreed publicly that in the selection of delegates to this Constituent Congress only such persons should be allowed to vote as were members of his own faction. All other voters were disqualified. Moreover, with respect to certain states, such as Oaxaca, where his authority was not recognized, methods even more arbitrary and illegal were adopted.

The Famous "Article 27"

THE decisions of this "Constituent Congress" as to petroleum are contained in the well-known Article 27 of the new constitution, which provides that

"in the nation is vested direct ownership of . . . petroleum and all hydro-carbons."

Curious enough, the language of the constitution does not go expressly to the extent to which Mr. Carranza in his subsequent decrees sought to carry it. It does not in so many words declare that petroleum under private lands belongs to the nation, and in Articles 14 and 126 it provides that no "laws" (the constitution itself being stated to be a law)—

"shall be given retroactive effect to the prejudice of any person whatsoever."

Article 27 contained a number of other provisions of great importance to the petroleum companies, such as one prohibiting corporations from acquiring, holding and administering rural properties, except in such area as the executive might fix as absolutely necessary for their establishments. There is also a provision preventing foreigners



from acquiring direct ownership of land within fifty kilometers from the seacoast—which includes almost all of the present known petroleum territory.

After the adoption of the constitution nothing was done for a year. Then, between February and August, 1918, a series of executive decrees were issued by Carranza purporting to carry the constitution into effect. In all these decrees he construed the constitution as retroactively affecting all lands acquired for petroleum purposes by foreigners, even prior to the date when the constitution took effect.

The essential provision common to all of these decrees was that those who claimed to be the owners of petroleum lands must file statements of the lands thus claimed by them and must pay rentals and royalties to the government as a condition of being allowed to continue in their operation.

Please note particularly that these decrees were not based in any sense at all upon the theory of eminent domain, for in every civilized nation the taking over of private property by the government for its own necessities can only be done if just compensation is paid to the owner of the property thus taken. In this case there was not even a pretense of compensation. The situation was precisely the same as though the state of Massachusetts should come to a man who for seventeen years had owned the house in which he lived, and which he originally bought and paid for, and in the title to which there is no defect, and say to him, "We have decided to take over the ownership of your property. If you desire to do so, you may still occupy the house, but only upon condition that you pay the government such rental as we may now fix, subject to any other conditions as we may impose."

I am not exaggerating in giving this illustration and in my opinion it is because of the utter inability of the American mind to conceive such arbitrary and conscienceless action on the part of the government of a nation which claims to be civilized, that the petroleum companies have found such great difficulty in making the justice of their position apparent to the American nation at large.

If anyone of you had owned the house which the State of Massachusetts in my hypothetical illustration had claimed, what would you have done?

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Tank cars filled with oil leaving one of the Oklahoma fields. Our oil supplies are fast ebbing. Outside of Mexico, the undeveloped fields of the world are pretty well pre-empted. In our neighbor to the south lies our greatest hope. Mr. Kellogg gives here a clear statement of what is back of the trouble over getting oil from Mexico.

Exactly what we did—fought.

The principal petroleum companies of the United States organized themselves into an association whose one and only purpose was and still is to contest in every practical and decent way the confiscation of their properties; and in making that fight we relied and are still relying solely upon two weapons; first, that we are morally right, and secondly, that the public opinion of the United States, if our citizens once but knew the real facts, would never permit the consummation of such a shame.

A Surprise for the Dictator

WE refused to comply with the Carranza decree. We allowed the day upon which Carranza had ordered that we must file our declarations or lose our properties to pass, and told his government that we should not file any such documents. This attitude was something which he had not looked for, and he at once revealed his consciousness of the weakness of his position by issuing a decree at the fifty-ninth minute of the eleventh hour postponing the time within which we were required to obey his commands.

We again refused, and on four successive occasions refused to do so, until finally, becoming somewhat alarmed at the prospect of the possibility of a direct conflict with the United States upon this question, Carranza announced that he would turn the whole matter over to the Mexican Congress, which should adopt the "organic law" regarding the petroleum industry.

No such law had ever been adopted up to the time of the end of the Carranza regime.

But although Carranza was unwilling to force a direct issue upon this question, we soon found that the campaign had taken a different turn and that he was seeking to accomplish his aims by indirect action. This assumed many different forms.

In the first place, many regulations of an harassing nature were adopted and a maze

of red tape was established in respect to almost every necessary activity of a petroleum-developing concern.

In the next place, governmental officers allowed the filing of claims against our properties by others who claimed to be entitled to acquire them under the terms of the Carranza decrees.

In the third place, concessions began to be granted to Carranza favorites permitting drilling upon certain lands comprised within the titles held by the petroleum companies.

In the next place, provision was made so that no company was allowed to drill on its own land unless it had a drilling permit, and that no permit would be granted unless in the applications therefor the petroleum companies agreed to abide by the terms of any petroleum law that might be enacted in the future. This resulted in stopping drilling and was one of the most serious difficulties with which we had to contend, for it set back the entire plan of petroleum development in Mexico for over six months—a loss which we have never since been able to make up, and which has been directly reflected in this country in the great damage to our mercantile marine, which depended upon this supply of oil for its fuel, to many great manufacturing establishments, likewise thus dependent, and to the users of gasoline in automobiles.

Lastly, and this was the most serious of all, he sent his armed force into the oil regions. Up to that time these properties had been in the control of Manuel Pelaez, himself a petroleum land owner and supported by many other Mexicans in the same position who had risen in revolt against the confiscatory plan of which I have spoken. During the whole period of occupation of this territory by Pelaez perfect order had prevailed. From the moment, however, that the Carranza forces entered, a reign of terror was inaugurated. Attacks upon messengers carrying money became every-day matters.

Many hundreds of thousands of dollars were stolen. Insults and assaults upon our men and, worst of all, a long chain of murders resulted. On one occasion Carranza soldiers entered a camp where four Americans were at work and, although they made no resistance, they were shot in cold blood. On another occasion a launch bearing payroll money was shot at from ambush and a man was killed, others being wounded. Twenty of our employees were murdered and not a single Carranzista was ever brought to justice. So far as my information is concerned, despite reports to the contrary, no arrests were even made in respect to any of these atrocities.

The campaigns conducted against us in Mexico were paralleled by other campaigns in our own country. Carranzista propagandists carried on a campaign for the purpose of poisoning the mind of the American public against the oil companies.

Constant repetition was made of the old assertion that we were "concessionaires," when, as I have already shown, no American ever held a concession.

We were accused of being tax-dodgers, although no question of taxation was ever at any time involved and the only money which we refused to pay were the "rentals and royalties"—payment of which would have admitted that our own properties no longer belonged to us, but to the government.

We were said to have fomented rebellion against the Carranza administration, when the fact was that the only rebellion in the oil regions was the Pelaez rebellion, which was originated and continued by the Mexican land owners who themselves were affected by the Carranza decrees.

What They Told Mr. Lind

THE argument was solemnly made—and has been repeated by John Lind, former governor of the State of Minnesota, in his sworn testimony before the Fall committee—that the law of 1884 was adopted as the result of a corrupt intrigue conducted by oil men with President Diaz. In this connection I cannot refrain from specifically quoting what Mr. Lind said under oath at this hearing. I wish to quote his exact language:

"The State in Mexico owned the oil until some time during Diaz's administration, when Lord Cowdray discovered oil. Then they secured an act of the Mexican Congress relinquishing the State claim to the oil and real property. Of course, Lord Cowdray and his organization in Mexico, under Diaz, were in position to virtually dictate, and they did dictate to the Mexican government what they wanted and they got what they wanted."

Senator Fall gave me the privilege of appearing before the committee to answer these statements of Mr. Lind's. This task was not a difficult one for the following reasons:

First: Lord Cowdray was not the discoverer of oil in Mexico. Messrs. Doheny and Canfield were the pioneers and Lord Cowdray did not enter the oil business until three years later.

Second: Lord Cowdray did not dictate the oil law of 1884 because it was dictated nineteen years before he had anything to do with the oil business.

Third: Lord Cowdray did not intrigue with President Diaz with reference to the passage of this law because Gonzalez and not Diaz was president when this law was enacted.

Fourth: No oil operator dictated or intrigued for the adoption of this law because the oil industry did not commence in Mexico until sixteen years after the date when the law of 1884 went into force.

How does the Mexican oil situation affect the United States at large?

First, and foremost, because of the moral principle involved.

Second, because of the necessity of Mexican oil produced by American companies to the industries and consumers of America.

Our navy is largely dependent upon fuel oil for its motive power. Over five hundred of the leading industries of New England have substituted fuel oil for coal beneath their boilers. Our merchant marine now uses sixty million barrels of fuel oil a year, and before long will need over one hundred million barrels. There are today 8,600,000 motor vehicles alone dependent upon gasoline in the United States and before the end of this year their number will probably have increased to nearly ten millions. We are taking no account of the motor cycles, aeroplanes, motor boats, stationary engines, etc., also using gasoline.

The internal production of petroleum in this country is no longer adequate for the needs of our consumption. During the current year the sum total of these needs will require the importation into this country of approximately eighty million barrels of Mexican oil if it can be produced.

Should the operations of our producing companies be further hindered and delayed or should they be compelled to cease entirely, through aggressions committed against them, millions of American consumers will be directly and indirectly affected, not alone as to price, but as to their ability to obtain petroleum products at all.

Lastly, the matter affects this country in its entirety, because the principles involved form the basis of our entire future foreign commerce.

It is beyond question that foreign commerce is today an essential to the industrial well-being of any nation. No country in the present stage of the world's history can live a hermit existence and still prosper. But if we are to have a foreign commerce our citizens must be willing to devote their lives and their capital to its development; and this will no longer be possible if it becomes known that the United States of America has adopted the policy of abandoning those of its children who are endeavoring to promote its foreign trade.

Why Take the Risk?

MEN will not risk their fortunes and their lives in discovering and developing the natural resources found within the borders of foreign lands and which are so necessary to our own national development if they know that when success has been achieved its fruits may be snatched from their hands.

Our individual citizens cannot stand alone against the organized power of foreign lands. They are entitled to the support and the help of our own government in their legitimate enterprises. With that support they will hold their own against the citizens of any other nation in this world. But they cannot do this by themselves. They must be protected where they are entitled to protection. And such a policy on the part of this government is simply one of respect for its citizens and for itself as well. It involves no bullying of small nations. It is not a policy of intervention, for intervention is promoted not by the man who believes in square dealing, but by the man who advocates the approval of crooked dealing at the expense of our citizens by governments or internationals of other nations. It is not a policy of war, but is a policy of peace.

Without such a policy our foreign commerce cannot be prosperously continued.

Carranza has gone, but the evil which he did lives after him.

At first the utterances of President de la Huerta were encouraging to the oil producers, but his later acts and declarations do not indicate any present intention on his part to recognize the rights of the petroleum industry.

Inasmuch, however, as his term of office ends on December first, it seems at the moment probable that the final adjustment of this matter will devolve upon President-elect Obregon. In several of his published statements Gen. Obregon has indicated his intention of adopting such policies as are calculated to improve the relations between Mexico and the United States; and the hope of the oil producers is that one of the first steps he will take in that direction, unless it shall have been previously taken by President de la Huerta, will be to cause the Mexican Government to abandon, once and for all, the discredited Carranza confiscatory scheme.

Better Business Bodies

By JOSEPH H. DEFREES

President of the Chamber of Commerce of the United States

IN THE beginning and for many years the organizations of business men were devoted exclusively and unfortunately, sometimes selfishly, to a particular business interest. But now a great change has come about in the methods of such of these organizations as are really influential. It has come to be recognized that many of the problems of a business organization have sympathetic relation to the problems of the community and must be dealt with by the organization in the public interest. Every good citizen should support such of these organizations as are normally related to his vocation and to his duty as a citizen. No greater truth can be stated than to say that every man's rating as a citizen should be in proportion to his services to the public, whether in private or public effort, or in both.

All such organizations not only must but should depend for their support upon public opinion. Our civilization and our government is founded upon regulation by public opinion. If a society and government is to function as contemplated, there must be a sound public opinion. If it is to be sound, it must be based upon the study and education which brings understanding. Such study and the dissemination of information for education purposes should be a major element in the effort of all service organizations concerning such subjects as are reasonably related to their basic purposes.

The organizations which have this conception of their functions and which are truly representative, are entitled to and will have an increasingly profound influence upon all measures to which they have given such attention. The day is disappearing for the autocratic organization with a high-sounding and comprehensive title, which, though it may have a considerable membership, represents in its operations only the arbitrary judgment of the few men who at the time may have its control.

The day of the "put over" organization is gone.

I regard the growing ability of American business men of all sorts—bankers, railroad men, manufacturers, merchants and farmers—to organize and fraternize in the mood of helpfulness and in sympathy with the public interest, as providing a solvent for our present and future troubles, the value of which may be without limit.



Hair Splitting by the Federal Trade Board

ASSOCIATION ACTIVITIES have been receiving more attention from the Federal Trade Commission, which reaches some interesting conclusions.

Standardization of sizes and types of machinery made by members, the commission apparently believes, is a desirable activity for an association, provided it is not carried to the point of eliminating sizes and types for which there is a real need. The results of standardization in this direction is reduction of factory costs and a lessening of the variety and sizes of materials that are used.

Formulation of schedules of accessories that are sold as a part of the finished product falls into the same category so long as elimination of "free" accessories does not extend beyond items that are seldom used by purchasers. Classification of essential features of equipment as extras might, however, be a means for exacting a higher price for the product and consequently might get an association into trouble with the anti-trust laws.

Cooperative handling of traffic questions would seem to have the commission's approval as tending to reduce to the lowest point costs on incoming materials and costs of distribution. Other efforts by a trade association for reduction of distribution costs, said by the commission to be commendable, include elimination of unnecessary service on the part of manufacturers, adoption of shorter and more uniform terms of sale, avoidance of having dealers carry unnecessary stocks, and cooperation with dealers to prevent duplication of efforts of dealers and manufacturers in sale and distribution. The point at which these activities should stop would seem, in the commission's opinion, to come when there would be shifted from the members of the association to dealers and the consumers the burdens of providing necessary credit, repair, or expert service that could more cheaply and advantageously be supplied by the manufacturer than anyone else.

Where Cost Reduction Is Approved

COOPERATION with dealers to protect them as an established channel of distribution is desirable only so far as it does not result in undue protection to the exclusion of the development of equally satisfactory and cheaper methods of distribution. Cooperation in enlarging the volume of business for the industry receives favorable comment; an example is advertising supplemental to the individual member's advertising.

Within the limits which are outlined, the commission would seem to view with approval activities by a trade association that reduce factory and distribution costs. So far as there are cooperative activities to keep the savings in these costs for the manufacturers the commission finds fault. Its view would appear to be that competition should have its full force and effect to distribute these savings, with a resulting chance for the consumer to participate in them. The competition should be fair, however, and accordingly educational activities intended to convince every manufacturer of the desirability of a system of accounting that will meet the needs of his business are held to be conducive to fair competition based on manufacturing and selling efficiency.

Cost study, as a part of such educational efforts, causes dissent by the commission, which thinks it opens the way to price control through understandings. In other words, the commission does not appear to find fault with cost study in and of itself, but takes the attitude that it is capable of misuse. The commission takes a similar position about exchange of informa-

tion as to selling prices, describing it as "nothing more than an open exchange of information that becomes public property as soon as prices are published or salesmen begin to use them," but adding that exchange of information is susceptible of misuse, especially for checking up members to see that they follow a course indicated through an earlier misuse of cost studies.

This reasoning is a bit tenuous. It is to the general effect that since a careless man or a criminal may use a knife to work harm on his neighbors, all men should eschew the use of knives for any purpose.

Perhaps the commission itself is not altogether persuaded of the soundness of its argument. With its remarks about the possible misuse of cost studies it associated a comment upon promotion of uniform cost accounting. In another publication issued this year, however, it found fault because there was not more uniformity and adequacy in the cost accounting of members of the industry, the manufacture of farm implements, to which its discussion of trade associations refers. It declared that "much essential information was lacking and there was such a complete lack of uniformity, both in their cost and financial accounting systems, that it necessitated an immense amount of detail work by the commission's accountants in order to render their statements comparable."

To the casual observer the commission would seem to be performing the physically difficult feat of going in opposite directions at the same time on the subject of uniform cost accounting. That may be another story, as a spinner of yarns once remarked. As for trade associations, the commission ends with a statement that a large part of their activities are for the accomplishment of legitimate economic objects.

That statement may record a deal of progress on the commission's part. About two years ago the commission intimated pretty strongly that little good could be expected from trade associations, and a prominent member of its staff later declared on the witness stand that all of them are devoted to works of unrighteousness. To a proper recognition of the nature of the activities of associations the commission now adds merely a caveat, saying it should be recognized that not all fields of effort to bring about economic benefits to members are legitimate. That is a truism to which every inhabitant of the United States can whole-heartedly assent.

World Trade Nearing Normal Again

PHYSICAL VOLUME of trade has been receiving attention from the Supreme Economic Council, which finds that the aggregate weight of exports from nineteen countries in the first quarter of 1920 was 67 per cent of the average weight per quarter in 1913, if the figures for British coal are omitted from the calculation. This is a decidedly better showing than in the first quarter of 1919, when the percentage was 44.

These figures cannot be taken as an exact indication of world recovery in trade; for they do not include data for Central European countries. In other words, they do not constitute an index of recovery for the part of Europe which has been most set back by war.

By countries the comparative statistics show progress. In the first quarter of 1919 France's exports were 9 per cent of the average in 1913, but in the corresponding quarter of 1920 they had risen to 43 per cent. Belgium's percentage had increased from 5 to 42. Italy's had gone from 29.5 to 40.6. The United Kingdom's figure had grown from 49 to 55. The United States showed a rise from 87 to 109. On the other hand, Canada's percentage had fallen from 108 to 103.



New Zealand Lets Us Go Ahead

OUR EXPORT ASSOCIATIONS, formed under the Webb-Pomeroy Act, have been a favorite cause for explosive epithets on the part of some New Zealanders. As represented in the abstract to New Zealand by some hasty volunteers of information, the new law of the United States had menacing aspects of the first order.

A bit of acquaintance with fact, however, serves to bring things into their true light. Acquaintance with our law has now progressed so far that the Prime Minister of New Zealand announced in the summer that, after careful investigation, he was satisfied our law is not detrimental to New Zealand's interests.

Preaching Economy to Governments

THE BRUSSELS CONFERENCE which opened on September 24 had much attention on the European continent. The reconstruction of the social and economic fabric of Central European countries seemed to be the outstanding idea while preparations for the conference were under way. According to some European observers, the first step in that direction would be loans to pay for imports of foodstuffs and raw materials into Austria, Hungary, Poland, Galicia, Czechoslovakia, Serbia, and Lithuania, the money to come from Great Britain, the United States, Argentina, Canada, Denmark, Holland, Norway, Sweden, and Switzerland.

On October 7 the conference was still in session. At that time it had not justified the expectation about loans, but had adopted some pointed recommendations to governments.

"Reduction in prices and restoration of prosperity," it said, "are dependent upon increased production, which finds a serious obstacle in the continual excess of government expenditure over revenue."

"Nearly every government is being pressed to incur fresh expenditures, largely as palliatives that aggravate the very evils against which they are directed," is another pronouncement in the conference's demand for economy.

To meet deficits, more taxes are the remedy of the conference, which condemns loans or other subterfuges for such a purpose. Industry and thrift are the cardinal virtues in the esteem of the conference; governmental subsidies in the price of bread, the price of coal, in the price of railroad transportation, and in other essential services merely postpone the day of reckoning and make it harder to bear when it comes.

As yet, only brief cables are at hand about the conclusions of the conference. Only the course of the mails can yield the full story about its recommendations.

The declarations outlined in the cables bear a close resemblance to some of the proposals drafted in advance by a committee of economists—one each from Holland, Sweden, France, Great Britain, and Italy.

This expert committee was appointed by the Advisory Committee which was in charge of all plans for the conference, acting upon behalf of the Council of the League of Nations. The conference was first set for May, then postponed to the end of July, and subsequently delayed a second time. When it finally assembled, it had before it an imposing array of reports in blue-gray covers, the report on the steps which had been taken by different countries to regulate exchange operations alone extending to 173 pages of generous dimensions. The series was intended as a first attempt at a picture of the financial and economic condition of the world, against which as a background the delegates from each country would project their special case.

Having been created by the Council of the League of Nations, the conference would seem in natural course to report back to it and to recommend the form which international action should take when sound and vigorous policy in economics and finance within the countries directly concerned cannot of itself cure the troubles of the day. Achieving recommendations upon such a subject is something of a task. What the conference did toward performing such an undertaking we shall not know until detailed reports are received.

Government Ownership!

FOR CHAPTER I of a textbook on "Elements of Government Ownership" we suggest the following from an interview with Admiral Benson, Chairman of the United States Shipping Board, published in THE NATION'S BUSINESS of October:

I went over to Baltimore about the middle of August, and found that a 9,000-ton vessel had been tied up in that port since the month of May. "What does this mean?" I inquired of the official in charge of the shipping.

"I have reported that vessel every day to Washington," he answered. "Simply in the way of a routine item," I said. "Now," I asked, "what would you have done had that ship been your own property?"

"I would have gone to Washington long ago," he replied, "and seen about it in person."

High Cost of War and Revolts

REVOLUTION is not good for railways. In 1913 the German railways had revenues of 3,347,000,000 marks and expenses of 2,345,000,000. The war promptly transferred the balance from one side of the ledger to the other. In 1917 the receipts were 3,648,000,000 marks and expenses were 4,435,000,000. Upon these figures the revolution worked great changes, with a result that for 1919 revenues were 6,674,000,000 marks and expenses 11,040,000,000. Estimates for the current year place the two figures respectively at fourteen and seventeen billion marks. All commentators appear to agree that, even with the greatly increased expenses and the government's absorption of the deficit, Germany does not have enough transportation.

Taxing German Business 75 Per Cent

GERMAN TAXES should be provocative of reflection. Certainly they are causing a very lively use of pencil and paper.

These calculations have results that are illustrated by the case of a manufacturer who had an annual income of 50,000 marks in the good old days before 1914. By reason of changes in money values rather than increase in business he now has an income of 100,000 marks, and a whole list of taxes. There is a war tax upon income in excess of a certain amount, a war tax upon the increase in fortunes during the war, an emergency levy upon fortunes over a certain size, local taxes in goodly amount, a church tax, a state fire insurance tax, a tax to support the chamber of commerce, and finally a general income tax.

When this possessor of an income of 100,000 marks has liquidated all of his tax bills for the year he will have a balance of 24,400 marks. In view of current prices, he cannot meet his necessary expenses out of this sum, and will draw 25,000 or more marks out of his business.

About all these taxes there is one curious feature. Their total result in time would seem to leave the manufacturer about where he was in 1914—upon one important condition. This is, that the mark gets rehabilitated and becomes as valuable as it was in 1914.

The Promise—and the Land

Immigrants coming to the United States have dreamed of this as the country of freedom and promise—Shall we regard them simply as so much muscle for our rough work?

By CHARLES NAGEL

Former Secretary of Commerce and Labor

A FEW months ago Congress was flooded with bills to discourage or restrict immigration in order that this country might be protected against the inflow of irresponsible people. No sooner had those bills been introduced than we were met by the other appeal—by a demand for immigration because we need labor. Some went so far as to say that if all other immigration were prohibited we ought to import Chinese just to do our work.

Neither extreme is safe. It cannot be right to have absolute restriction; it cannot be right to rely entirely upon imported labor to do our work, and it cannot be right to import anybody merely because he is willing to do our dirty work. An immigrant represents a political as well as an industrial question; and in my judgment, broadly speaking, no man or woman or child should be admitted into this country unless that person or family promises ultimate fitness for United States citizenship.

Assuming, then, that we are to have some immigration, the question is, "What is the policy?"

In times past, during the last century, and especially the first part of it, immigrants came actuated by the same spirit that moved the original founders of this country. They came as pioneers, to conquer the soil, to make the combat; and they came inspired by love and understanding of free institutions. My father used to say to me that there were times in his life in the old country, when he never cared to read a book until the government had suppressed it. You know that we have sometimes come close to that test in this country. There were a great many people who read books that had been suppressed. We had a good deal of absolutism, but that was war. What we want to be careful about is that we do not perpetuate that absolutism after the war is over.

Then came another phase, the stimulation of immigration. Ships wanted cargoes; the railroads wanted transportation; industries wanted cheap labor; foreign countries wanted to get rid of certain parts of their population. All these forces worked together, and there were brought to our shores some people whom we did not want, and who really did not want us.

That led to the first restriction laws. They were fairly severe. I think they were crude—very difficult to administer. There were in those laws certain features that, in my judgment, were infinitely dangerous; in other words, subversive of the very institutions under which we live.

For instance, the immigration law which I had to administer dealt entirely with the individual who came over. If a family of

Is There No Hope for These?

A STEP toward Mr. Nagel's goal is being taken by such bodies as the Delaware Americanization Committees. Here are some extracts from the commencement essays and addresses of its pupils. The girl who copied them said that she "didn't know whether to laugh or cry" when she read them:

"I found Liberty and many good other things which I can't explain as my hart says, but my mout didn't help me."—*Mike Mallas, Greek.*

"So can become a citizen of the United States—that is a beautiful think to me."—*Carmela Bucca, Italian.*

"Upon arrival in the United States we were for America at that time, may I say, dead, because we did not understand American language. . . . With a great tensity I am waiting for the time when I can take my second American naturalization papers."—*Harry Kosowski, Ukrainian.*

"I was 27 months in the trenches and was wounded three times. Then my government sent me to America to make shells. . . . If America did not help us, we would now be part of Germany. Oh, people from many lands! Cry to God for America!"—*Edouard Orillo, French.*

"I want to help America The United States treats me all right I must treat this country all right."—*Antoni Drupieski, Russian.*

"I be very glad and grateful for hospitality this good country gives for strange peoples and I no can express immense gratitude my heart wishes for it."—*Enrique Rojas, Spanish.*

five landed at Ellis Island, the commissioner would be compelled to pass upon each individual member of that family; and over and over again the result would be that several of a family would be admitted and others would be returned to the old country. That is a tragedy. That is destructive of the family itself; and the family is the foundation of the state.

There came a man, a mechanic, to my office in Washington from the interior of the country. He told me that he had been here nearly three years. He had used his money to send for his wife and his three children. They had landed. Two of the children had been rejected because they had a contagious disease—a scalp trouble. I remember he told me he would walk on his knees to the station in Baltimore, if he could save those children. I promised him that they would not be deported if I could help it. But the certificate of the doctor, who was not under my control, but in the Treasury Department, was conclusive upon me, if that certificate stood.

I went to Baltimore to examine into the case. I found the man outside, looking

through the gates; the woman, with the three children, inside. There was the certificate, which was conclusive upon me, and I called the doctor and asked him whether he would stand on it. He said he thought it was right. I said: "Is it possible to cure that disease?" He said: "Sometimes." I said: "Will you modify that certificate to say: 'Probably incurable?'" He said: "Yes, I can do that honestly." It was done. A specialist was procured in a Baltimore hospital to treat the two children there; the mother with one child were admitted to join the father. In six weeks I was told the invalids would be cured. We secured a specialist at the interior point. The county court gave me a special room for those children, to segregate them. They were sent out there under proper protection and they were treated. Finally, the certificate arrived that those children had been absolutely cured; and they were admitted. That was a matter of many months' attention. A year or so afterwards the girl wrote me almost as follows: "My dear Mr. Secretary: All of our family pray for you every night. If you had not come to Baltimore, we should have been sent back to the old country. . . . Brother and I now go to the public schools, and you see I can write English a little."

A Reason for Belief

DID I Americanize those people? I venture that that man and every child he has would stand to the stars and stripes through thick and thin, because they have reason to believe in our Government. If I had let those two children be sent back to the old country, we might have made anarchists of those who remained. What would you be if a government told you that it had to protect the freedom and the security of its institutions by sending two of your babies back to the old country to suffer the fate that would inevitably be theirs?

If you cannot admit a whole family, reject them all. But if you admit the head of the family, he must have the right to take care of his own. We must take the benefit and the disadvantage both. If we endeavor to choose by taking the sound and rejecting the others, we may have physically sound, but we will have morally and mentally unsound people in our midst.

Inasmuch as we asked nothing else at Paris we might have secured the simple right to examine and pass upon proposed immigrants before their start. This provision would not have covered all cases, but it would prevent much unnecessary hardship.

And then the law was made more drastic, by adopting the literacy test. I fought that. President Taft vetoed it; President Wilson



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Immigrants at Ellis Island receiving final advice before taking the trains that will carry them into the interior. The last authentic figures gave our foreign born population as 13,515,886.

Welcome them as human beings and prospective citizens and there can be no doubt about their proper assimilation; exploit them, and you have promise of serious industrial indigestion.

vetoed it. It was finally passed over President Wilson's veto. The literacy test simply provides that the person coming in shall be able to read some language. It was never intended as a test of merit. When I said that I would rather trust a man who cannot read but can look me in the eye and has a horny hand, than I would an educated scoundrel, the answer was: "Why, that was not intended to be the test. What we are trying to do is to find a test that will exclude the people from southern Europe."

In those days they said: "Why, if we could still have those people from the north, the Swedes and Norwegians and Danes and Germans and Dutch come in here, we would not need this law, because they have made valuable citizens. What we want is to protect ourselves against 'the scum of the earth.'"

I answered that I did not believe in legislation by indirection. If you have a purpose, tell it, so that an American can understand it. If you mean to exclude particular people, call them by name; and if you can not do that, do not get at them by adopting a law which practically makes a crime of their undeserved misfortune; for half those people have no education because the governments have denied them the chance.

There is the test. What are we going to do

now? Are we going to insist upon it? The majority of those people whom we then had in mind are now on the allied side. They have fought with us in this war. We have fought to save them; we have talked about democracy and humanity until we have set the whole world adreaming, and we must not stop that dream with a shock. The best we can do is to guide it. So it appears to me that that question will have to be approached with more care than ever before.

It all comes to this, in my mind: There never was a branch of the government in which the letter of the law was less important and in which the administration of the law was more important. Discretion is one of the things the government cannot buy. It, at least, is the hardest thing to get. And yet, discretion, wisdom, fairness, are the things we need in this country, in all those branches of the government with which the masses of the people come in contact.

I regard this whole immigration question as one that has to be treated on much broader lines than the mere question whether our industries shall be fed. I would be unwilling to predicate any immigration policy upon the mere necessities of industry, because I would always want to keep in mind that question of fitness for ultimate citizen-

ship, based upon toleration and understanding.

Why should we be more sensitive than other countries are on this subject? France has in her ministry one man named Schmidt and another one named Klotz. They do not take offense at ancestry. Great Britain has a German-born, Milner; Lloyd George is a Welshman; Bonar Law a Scotch-Canadian; Lord Reading, a Jew, and Carson is an Irishman. They are not all Anglo-Saxons over there. They do not waste energy on any such friction between races. So we must pull ourselves together, because we have a situation to meet, and we are losing energy and opportunity in the delay.

We have decided that we must have a union of states. We must show that we can have a union of people—not a union of race groups. Self-determination has failed of its promise on the other side. Here it has been strangely misapplied. That is our danger. There is a greater race-consciousness in this country now than we ever had, and we must break away from it. We must have a union of the people as such, to make one nation. There must be an amalgamation. There must be confidence and trust. That is the safe foundation. And we will be one people. We will have an American type unlike anything else in the world.

The Dark Ways of the Ad Fakir

He is a suave gentleman, with alluring schemes for his own profit; but commercial bodies are learning to outwit him and protect those who are helpless before his hypnotic salesmanship

By WILLIS B. POWELL

Secretary, Lake County Chamber of Commerce, Tavares, Fla.

THE MANAGER of a large winter resort hotel at Southern City picked a piece of printed matter from a pile that had just been unwrapped and laid on his desk by the office boy. He threw it down and contemplated the smut the printing ink had left on his thumb and forefinger. He touched a button. In response the head clerk appeared.

"Charley, who ordered that batch of printing?"

"I know nothing about it, sir; it was delivered this morning by a lad from a small print shop across the river."

The printed matter in question was a sixteen-page pamphlet. The first page proclaimed it to be "A Guide to Southern City. Souvenir of the Restful Inn." In smaller type it further affirmed that the pamphlet was issued under the authorization of the hotel. The pages which followed alternated local advertisements and misinformation concerning the city, its attractions, theaters, railroad and steamboat time-cards, and names of city officers.

The souvenir was a disgrace to the art of printing. Typographically and mechanically it did not possess a redeeming feature. The paper was cheap; the ink was cheaper. The few half-tone cuts were a blur, very much like looking into the interior of a smokehouse.

"It appears to me," resumed the manager, "that the fool killer has gone on a vacation. Zink Brothers lead off this glittering parade of punk publicity. Call their advertising man and let us get a bill of particulars."

The advertising manager of Zink Brothers, leading merchants, was delighted to know the souvenirs had been delivered to the Restful Inn. "How do you like them?" he queried.

An Insult to the Coal

"LIKE them?" responded the hotel man. "Nothing can approach them. In truth, it is a crime to mix them with the coal down in the furnace room. How much did that space set your firm back?"

"One hundred real dollars. But, say; tell me what's the trouble?"

"Drop over to the office right away and get a couple of the souvenirs. When it gets generally known that this is souvenir day and we are going to present all callers with the brochure, there will be such a crush that you may not be able to get even a show-down for your hundred." The advertising manager for Zink Brothers was soon ushered into the private office of the hotel manager.

"Tell me about it," demanded the manager.

"I feel that the house has been stung good and proper," he admitted. "I can tell by your attitude that you were not a party to this crime. It was this way: A suave gentleman called upon me within the month handing me a letter from you. It was written on your private letter paper and bore your signature. That letter stated that you were to issue a beautiful guide book to the city for the accommodation of your guests, and had given the bearer full authority to issue same. You would be pleased to have an advertisement from our house, etc.

THIS STORY is fanciful only in its names. All over the country business men are using their organizations as a means of sorting the sheep and the goats of advertising. The little card that refers the get-rich-quick solicitor to the chamber of commerce is often enough in itself to get him out of town.

The "Better Business Bureaus" of the advertising clubs are helping on the same line by teaching the merchant to tell straight advertising from crooked—and teaching him, too, that his own advertising must be straight if he would keep the questionable solicitor out.—THE EDITOR.

"It was a sort of veiled hold-up. The solicitor carried samples of exquisite printing. The smooth-tongued artist told me that the book would even surpass them in attractiveness. He temptingly told me that the only advertising would be that of the firms which you had recommended."

"I felt flattered at this fine discrimination, as the trade of your guests is considerable each season. The solicitor asked \$100 for the card, and I gave him the copy and a voucher for the amount at once. Had he asked \$250 we would have been only too pleased to show our appreciation of your trade. That's all, except the tears. But we are not alone, here—" turning the pages, "is Armedite, the jeweler, and Duggin, the plumber, and Smith, the electrician, and—"

"Yes," continued the manager. "In this exquisite souvenir, conceived by a pirate and printed with apple butter, can be found the cards of every firm, corporation, individual engaged in remodeling and refurbishing and refurbishing this hotel. If they all paid at the rate that Zink Brothers did the solicitor has turned a trick for \$2,700 minus about \$3.57 for printing. I shall, at least, send each advertiser a copy and explain to him that this hotel does not sandbag those with whom it does business. Have a cigar and forget it."

This is a true tale. But it has only been half told.

The wily advertising fakir was a student of human nature. He knew full well that the high-grade concerns, victims of the hold-up, would keep their own counsel for obvious reasons, of which pride was the lesser one of the two—the other reason will be related further on in this narrative.

Southern City was a half-commercial and a half-resort over-grown town. Like all places of this class it was grievously afflicted with the advertising fakir. This genus travels with the seasons and the seasons' devotees. If they have not the price to jump from Atlantic City to Palm Beach, or from Asheville to Los Angeles, they "work"

the smaller towns en route, but eventually reach the pastures that are verdant.

Southern City had a Board of Trade with 600 members. It was a live organization. To circumvent the advertising fakir the commercial body established a "Clearing House of Advertising Schemes." Confidentially, it was a graveyard rather than a clearing house. It was officered by the Mayor, a newspaper man and a great merchant.

A placard was issued to the members of the Board of Trade by the Clearing House. This was hung in the offices of the smaller merchants and professional men. If a business was pretentious enough to afford an advertising manager, the card was posted where it acted as a buffer to solicitors. It read:

NOTICE TO THOSE SOLICITING ADVERTISEMENTS

for programs, hotel registers, guide books, art novelties, etc., and all other forms of advertising except that of established and reputable newspapers and magazines:

This concern will not consider any such publicity unless the solicitor has a permit from the Clearing House of Advertising Schemes of the Southern City Board of Trade.

(Signed)..... Proprietor.

In smaller type there was an N. B., stating that the concern would be penalized the sum of \$50 if it subscribed to space in any program or paper, etc., which had not been endorsed by the above committee.

A Pardonable Bluff

OF course, this rule was frequently broken. One of the committeemen had a card in the Inn guide book. Every advertiser in this sorry pamphlet was a member of the Board of Trade. However, none were fined, as the penalty clause was 100 per cent bluff. Whether the members were fined or not was of no concern to the solicitor, and he was always led to believe that the penalty was enforced.

An advertising solicitor would strike Southern City fresh from a prolific field 200 miles farther north. After getting the lay of the land he would approach the biggest house on the main business street. With its contract in hand half the battle would be won.

Mr. Fakir would inquire of the floor-walker who's who and why and get his bearings for the general offices. In the anteroom he would glimpse the "Notice to Those Soliciting Advertisements."

"Nothing doing sign here," he advised himself. Apologizing to the office boy who was about to ask him to further state his business, Mr. Fakir picks up his hat and retires gracefully.

Across the street was the store of Wells & Sons.

"I'll take them on," thought Mr. Fakir.

But at Wells & Sons the same "Notice" stared at Mr. Fakir. Before he had entered the fifth store he had a prescience, which disturbed his nerves, that that "Notice" would confront him with its bold and impudent invitation to beat it.

"That edict is some joy-killer," confided



The starting of the promoter and his automobile on their triumphal journey was made a holiday.

Mr. Fakir to himself. "It has gotten me beaten four ways at once. I couldn't get up enough steam to get by it to present my plan to revolutionize the publicity of this burg. I am going to meet up with that Clearing House or clear out. If they will but listen to me I will divorce them from their pet peeve."

Mr. Fakir would set his compass for the Board of Trade rooms and humbly ask for a conference with the advertising committee.

"Please state your plan," demanded the secretary. "I will then present it to the chairman of the advertising committee, who will decide whether or not it has sufficient merit to justify calling his colleagues together."

Mr. Fakir would unfold his plan of separating the merchant from his money. He would be told to call on the morrow.

On the morrow he would be advised by the secretary that the advertising committee had refused his request.

It was seldom that the secretary referred the plans to the chairman of the committee, and yet more seldom that the chairman asked the committee to meet with him.

Mr. Fakir would leave Southern City in disgust.

"It is the only original keep-your-money-at-home town in these little old United States. You couldn't wedge in there if you guaranteed to stamp their names in the book of life in gold leaf at thirty cents a throw. I'll pass the word along for us gents to give Southern City a wide berth."

And it was very much like this. Southern City figured that the first winter season after the placard was installed in the offices and business houses of its merchants, manufacturers and professional men, \$50,000 was saved the members. The time saved by circumventing the solicitor was equivalent to another \$50,000.

Southern City solved the question of ridding itself of a nuisance which absorbed the time of the merchant as well as absorbing a considerable amount of his advertising appropriation. It also placed advertising on a higher plane. Money heretofore spent by small merchants on advertising schemes was spent through legitimate channels. It paid them

and made more money for the local newspapers. A new era of publicity was engendered. An advertising league was established. Concerns which paid little attention to what they said in their advertising space in the newspapers, established advertising departments. The Board of Trade let the advertising league take up its work where it left off, and naturally, protecting their own interests, the advertising fakir was shown scant courtesy.

So much for the possibilities of faking the fakir. It is simple and effective. Any town or city, big or small, can put the plan into effect with the cost of a few placards and a gentleman's agreement to refer the advertising fakir to the head of its commercial club, who has the nerve to say no.

This mode of procedure has no standing at law, but it has a moral status. It takes men of backbone to refuse a contract to a soliciting committee of women from the churches or lodges, or a delegation from a workingman's organization, or a number of high school pupils engaged in "getting up" their annual. They are "home folks" and most likely customers. Yet there is no "touch" more prevalent than this form of petty graft. In most cases it is accompanied with threat, open or veiled: "If you do not patronize our program we will never trade with you again."

Scheming to Get Around It

REFUSALS by some merchants were diplomatically handled by contributing to their "cause" a sum of money equal to the price of the space allotted to them. This was not acceptable to the committees at times, because the advertisements of the larger establishments were thought necessary to influence the small merchants to take space.

A soliciting committee in starting out to "work the merchants" has a list of prospects gleaned from previous programs. In some towns there are bright young men or women who make a business of soliciting for advertisements for any church, society or school, working on a percentage basis. They know the "easy marks" and can fill up the space in a half day, most of the spaces by phone. The itinerant advertising fakir frequently

employs these local solicitors. If not, the itinerant resorts to a glance at the theater program; the merchants who advertise on hotel register blotters, and the inevitable hotel combination inkstand and stationery rack or the public thermometer or clock or the combination mile post along the roadway which paralleled the railroad. The merchant who once falls into the error of taking space in everything that comes along is a doomed man.

One of the humors of this world is to expect a traveling man, tired and dusty from twelve hours' communion with dust and cinders and innumerable black cigars, to linger over a hotel register to learn with deep concern that John Heim deals in fresh meats of all kinds, or to be refreshed with the news that Hank Rittle can be found at the old stand with fancy and staple groceries. The hotel register, with the advertising blotter crowded to its edges with advertising cards, is an institution. It seems to be one of the necessary evils, like the theater curtain, which you stare at before the show and between the acts. You get to hate that art abortion and hate the advertisers who made it possible.

The movie picture craze has developed another class of advertising that has but little merit, without it be a "flash" of some goods of national character, which also popularizes itself with bill boards and street car signs, as supplementary to its newspaper and magazine advertising. Advertising slides are thrown on the screen when the house is being emptied. Those remaining get but fleeting glances of them on account of the movement of the audience. It has been proven that the public does not care to have its love of inanimate drama or comedy interspersed with sordid commercialism. Mabel and Percy object to having their love dreams at the climax of a thriller shocked with advertising that brings back to them too vividly that the high cost of living has advanced indefinitely since the date of their wedding.

Before Southern City intimated to the advertising fakir that he was unwelcome they came in droves and legions each winter and operated with an unvarying degree of success. The strange part of it was that men of

prominence and influence fell under their spell.

One stunt that was pulled off still rankles in the breast of a number of men of big affairs, from the governor down to Southern City's dog catcher.

The publicist who hypnotized so many men and institutions, swooped down on Southern City, evidently from the skies. That was very possible, for no one questioned his wherefrom, antecedents or previous condition of servitude.

His scheme was to advertise Southern City and its environs by aid of high-powered automobile, dressed in livid red by day and brilliant white by night. Within a week or so he was driving the auto. It was high-powered all right—about as nifty a wagon as was built in those days. How he got it, no one knew—until later, then one concern knew and is still with the knowledge. The auto was decorated according to specifications, and gasolined by admiring garages and commercial clubs. A transparency read by day and night across the top "From Southern City to Troy, N. Y." The transparency and the electrical system which lighted the letters probably cost \$6, and up to the present time it is the only expenditure he put into or on the machine.

Troy Is Exonerated

AS Troy, N. Y., was not a party to the project it is mentioned boldly, to give some credence to the wonderful tale. Not to our knowledge did the people of Troy sit up nights waiting for the coming of the red projectile.

The scheme went even further. A magnificent book would be printed, descriptive of Southern City and many cities about it, for in that section all places were dignified by being referred to as a city—the beauties and possibilities of the country to be set forth in glittering text and glorious pictures. Ten thousand copies of this book were to be printed and they would be placed in hotels, clubs, libraries and in private homes of the elect in sixteen states. Special bound copies would be handed in person to sixteen governors and the President of the United States.

It was to be a triumphal march. Mayors of cities en route, burgomasters of villages, attended by brass bands and floats of beautiful maidens on a hayrack, dressed in white, representing allegorical things, would meet the car at every cross-road and over flower-strewn highways and byways would the car wend its way. There was more of the same line of junk promised, and the pity of it is that they "fell" for it.

The governor endorsed the project. Big business said it was a wonderful advertising stunt; the press played on the loud pedal for citizens to rally to the banner of the promoter's joy ride. Commercial clubs and town councils voted \$250, \$500 and even \$1,000 for space in the big book.

The book was the thing. It would go thundering down the ages as a classic. Space became scarce. Page after page of text and picture was thrown into the discard, and advertisements supplanted them. When there were about four pages of reading matter left in the wonderful book, Mr. Promoter wired procrastinating commercial bodies and town councils to hurry up or forever hold their peace. They hurried with the copy and the cash.

The day came for the promoter and his automobile to start on its triumphal journey. The event was made a holiday in Southern City. Bands played, flags fluttered, children shouted. Headed by the dignitaries of the town in autos, followed by the promoter and some big wigs in the red auto, and police-

men flanking the sides, the procession started. A hundred or more cars in the rear did not count. The multitude crowded the sidewalk, all in good cheer. Gay girls threw roses and kisses at the promoter.

A mile from the busy town the procession halted and the usual message to governors and the President was passed into promoter's hand, adieus were said, and, throwing the car into third speed forward, Southern City's pennants waves a fare-thee-well, Brother Watkins, ah.

The populace returned to their various avocations and night blanketed the banners and bunting.

The promoter sent a long message to the morning paper of his glowing reception at Punkville. He was heard of more or less as he passed through the places that had financed him.

The evening paper was eagerly sought by the people of Southern City to mark the progress of the car. The letters came further apart after the first week, and were much shorter, and some seemed to have been manufactured from the Automobile Blue Book. Within two weeks the letters ceased altogether.

Where was Mr. Promoter and his \$5,000 car and his \$10,000 book?

Southern City had been stung again.

The printer who had the contract to print the 10,000 edition of magnificent books descriptive of Southern City and its environs, printed 300 copies of a pamphlet that was 99 per cent paid advertising.

Mr. Promoter's previous record came in by freight soon afterwards. It was learned that some months previous to his meteoric advent into Southern City he was selling extracts made out of rainwater and coloring matter. He had been arrested for skipping a board bill and his clothes and manufacturing plant, consisting of a bucket and a funnel, confiscated.

Enter J. Flyer

WHILE the big advertisers and commercial clubs and citizens generally were rubbing the sore spots, John Flyer came to town and within a day or two had signed up fifty business houses to take space on a piece of straw board which was to be inserted under the bosom of stiff shirts as they came from the laundry. The laundryman accompanied Mr. Flyer about town, introducing him to possible victims. One hundred thousand of these bosom boards were to be printed. A man who was in a rush to catch a train or was late at dinner would sit down and read the shirt bosom literature and marvel how he ever kept up his establishment without the interesting information. The 100,000 bosom boards were sold to a junk dealer within a month after delivery to the laundry, and afterwards a printer secured them and used the boards for tableting stationery.

Mr. Sackett followed right along after Mr. Flyer. In those days the fakirs fought for territory. They got to treading on each other's toes. The council had passed an ordinance making it obligatory for itinerant solicitors to take out a license to work the town. Mr. Sackett appealed to the powers to have the license rescinded in his case, as he was a philanthropist. His scheme was to print cards of firms on paper bags in sizes from 8-pounds to 16-pounds. They were given to merchants in any quantities desired free of charge. This would reduce the high cost of living, as the groceryman and the fruitman and pop corn and peanut merchants would reduce the prices on all commodities. He was the greatest benefactor to the human

race since the Boston tea party. The powers—that-be were stern.

"If you were a citizen of this city," said they, "you would not be compelled to buy a license. Why don't you buy property here and become one of us. We need you here. Pittsburg has its Andy Carnegie; why cannot we have our Mr. Sackett?"

Mr. Sackett took the hint and bought a town lot at Sedgebrush-by-the-Sea, paying \$1 down with promises to pay 25 cents a month thereafter as long as he lived. Armed with a bond for warranty deed, he started out to do business. And he *did* business! He made promises to the advertisers for enough grocery sacks of assorted sizes to last the city until judgment day. Each groceryman, after listening to his line of talk, readily signed a letter of introduction which recommended him to the trade in general and told him to go the limit.

"Sacking" the City

IT was such a high-sounding letter that Mr. Sackett could have been received into membership in any church on the strength of it. Mr. Sackett was quite successful in his solicitation for business. The advertisers took so much space that he had to print six sets of 16-pound sacks. This was really quite an expense to him, as the composition bill must have been \$6 or \$7, and he also had to pay for about 200 16-pound sacks, just enough sacks to leave one with each advertiser as he collected his \$10 to \$25. He forfeited his suburban lot and left town. Not since the beginning of civilization has a city been so ruthlessly sacked!

Along about this time the State passed a law providing that every highway should be marked with a mile post. There are 78,000 miles of such highway in the State. County commissioners were immediately presented with a proposition to mark the highways free of charge to the county, if exclusive rights were given the petitioners. Accepted. Within a few months from north to south, from east to west, these mile posts appeared as if by magic. A galvanized post was sunk into the ground. On the apex was a board with the mileage painted thereon, also indicating the nearest town. Beneath revolved a four to six-winged contraption, not unlike a paddle-wheel of a river boat designed to navigate on dew. On the wings appeared advertisements of merchants of near-by towns. Within a week or so the paddle-wheels needed oiling and refused to revolve. Or they got tired and laid down, never to rise again. Small boys after rabbits used to run a rifle range with them. Bets were made that they could hit Jones' sign as it revolved. Today there is seen an occasional signboard out of the tens of thousands. But its paint has been dissipated by heat and rain, and it leans sorrowfully, a monument to more squandered dollars.

This article has simply skimmed over the thousand and one devices made to make men believe that their business salvation hinges on buying this or that, taking space in this or that, or doing some fool stunt.

There is the merchant who feels that the proudest day in his life was when he paid \$25 to have his name and business painted on a piece of sheeting and slung over the baby elephant in the circus parade. There is the man with a clown suit and an educated pig or goose who will advertise you all week for \$50.

All in all, Southern City has fixed the fakir. It no longer dreads the coming of the tourist season. Next it is going to clean out the street beggars, and life then down there will be all joy without a discordant note.

What Do the Theorists Say to This—Prices Decline, Though More Money Than Ever Is in Circulation?

By ARCHER WALL DOUGLAS

THE TREND of the industrial situation is still towards lower prices and a lessened demand. These factors are especially noticeable in cottons, woollens, leather goods and automobiles. Most other lines of industry are as yet but slightly affected, since in many of them, especially finished materials in metals, demand not only absorbs the daily supply, but presents depleted stocks of merchandise to be filled up.

It is still true that there is no general condition either in demand or prices. Each line has its own separate story of cause and effect. Declines in food prices are naturally fol-

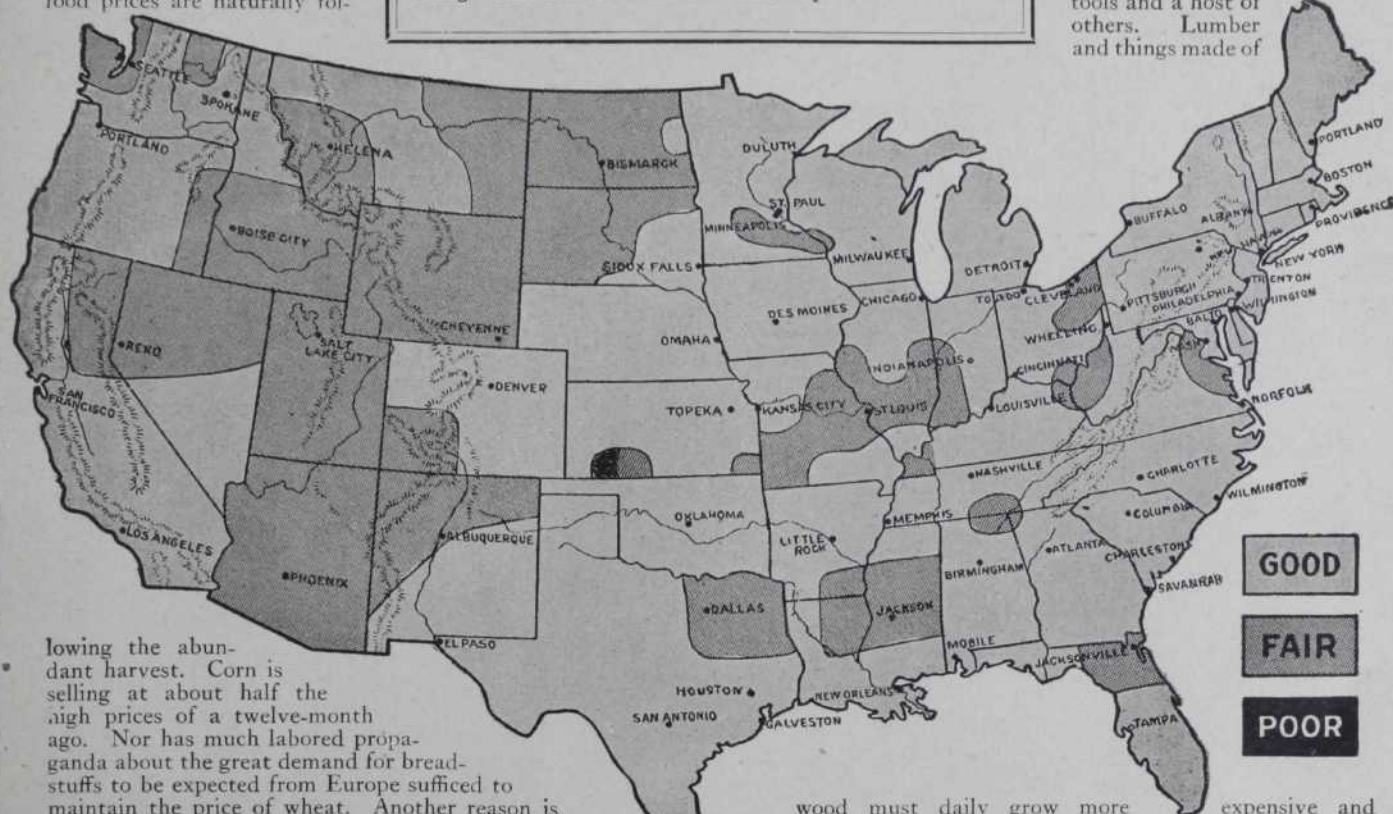
lowing the priceless heritage of the vast forests which once covered so large an area of this country. They are more than half gone, and still we are deaf, dumb and blind to the grim consequences of this fatal lack of foresight.

The vital needs of forests and trees in every phase of country life needs no setting forth.

In industrial life the need is equally as pressing despite all the substitutes for food we are daily concocting. Besides there are vast industries whose very existence depends upon the continued production and use of wood. Nails, for instance, edge tools and a host of others. Lumber and things made of

Business Conditions, October 11, 1920

THE MAP shows at a glance the general condition of the country. It is prepared by Mr. Douglas as a weather map of business. The light areas indicate promising crops, industrial activity, the creation of new needs in home, shop and farm—in a word, "high pressure" buying markets. In the black areas these conditions are lacking, for the time being. The shaded areas are "half way."



lowing the abundant harvest. Corn is selling at about half the high prices of a twelve-month ago. Nor has much labored propaganda about the great demand for bread-stuffs to be expected from Europe sufficed to maintain the price of wheat. Another reason is that our neighbor, Canada, has a great crop. The three prairie provinces alone will produce about two hundred and fifty million bushels of wheat. They can consume only a small portion of it, and their storage facilities are most inadequate. There is nothing left for them but the export trade.

The general buying attitude is conservative, but does not stint its needs. The day is past when if you had goods, some one came and took them away from you, and paid the price you asked without kick or comment. Still the volume of business in general runs in large measure. For all of which the great harvest is mostly responsible.

Those who predicted continued high prices because of the great volume of money have mostly taken to the woods. For the amount of currency in circulation is greater than ever before, and yet prices are on the decline.

Building continues dead, despite many figures of estimates of probable production and of construction permits. They are a characteristic example of the difference between statistics and cold facts.

Few stories are of greater moment and importance to the nation than that of the recently published history of lumber; of

wood must daily grow more expensive and difficult to obtain. Yet we have scarce learned the first elements of reforestation—as it is done, for example, in France. Meanwhile a great business, that of lumber, is employed in consuming its capital. And between this and the eras of feasts and famines of demand and prices which mark its history, it is wondering what fate has in store for it.

Unemployment grows slowly. It is most noticeable in industrial life and in localities connected with textiles, leather goods, and automobiles. Coincidentally the strike fever is waning, and efficiency is increasing. For there is a fast growing public demand for service; a demand born largely of what we have endured on every hand for the past five years. In the Old Testament, Jehovah expressed himself—rather forcibly—of being weary unto death of the Israelites and their protestations; of their New Moons and Sabbaths, their solemn meetings and appointed feasts. And this is about the way we feel to those who have afflicted us.

The expensive theorists and the blunderers in executive positions, the inciters of class strife, those who loaf on their jobs and demand more pay for it. We are fast coming to the period when the standards will be those of common sense and work

honestly done. We shall, in all likelihood, not experience any shortage of labor during the coming months. This may still be the voice of those who, with incredible folly, advocate the importation of cheap labor, without regard to color, to fill the supposedly depleted ranks of manual labor. Thus to add to a race problem apparently insoluble and to which time has given no answer.

The corn crop is made and it is the greatest ever. The mere story of its unprecedented volume brought about the present low prices, especially of the December option. And thereby hangs a tale. Nothing has sufficed to keep up the prices of wheat and cotton. For the laws of supply and demand cannot eventually be denied. Every student of the situation realizes that much of the welfare of the country depends upon the purchasing power of the farmer. And that this in turn hangs upon his receiving reasonably remunerative prices for his products. But how to do this in face of the competition, nationwide and world-wide, is yet an unsolved problem.

No price understandings, nor withholding of products from the markets, ever succeed

for more than a comparatively brief space of time in maintaining the price of any commodity, whatever its nature. And in the downward price movement somebody has to pay the piper. For natural laws are no respecter of persons.

So far in agriculture, more efficient and more economical methods of marketing are the only apparent solution. In Canada it seems to have been done very successfully in wheat, and without placing any additional burden upon the consumer. The plan of suiting the supply to the demand in agricultural products especially is far more complicated and difficult than appears on the surface. One salient reason is the impossibility of telling at seeding time what supply and demand and prices are likely to be some months from then at harvest time. With wheat today declining in price, fall plowing for winter wheat is greater than at this time last year.

Transportation, now unshackled, shows distinct improvement. Also a refreshing spirit of consideration and accommodation. We have learned that the sentiment of "The public be d—d" was not confined solely to an old time railroad president.

city, and represents their ideals, their aspirations, their hopes and their ambitions.

Acuity cannot be greater than its inhabitants. It invariably reflects their habits, ideals, hopes and fears. No city can grow in advance of the ideals of its people. They must first mark out the way, then begin their onward march to their goal.

The soul of a city is its precious possession. It shapes the character and molds the minds of its young men and women. It determines their careers, and gives them an inspiration for leadership in their great world of affairs. It is the refined gold that is transmitted into the lives and characters of those who are fortunate enough to be born and reared under its influence.—By W. B. Bates, secretary, Board of City Development, Amarillo, Texas.

For Hydro-Electric Power

IN A recent issue of *San Francisco Business*, the weekly publication of the San Francisco Chamber of Commerce, an authoritative presentation of hydro-electric development and what it means to California is given. John A. Britton, vice president and general manager of the Pacific Gas & Electric Company, points out that the western states have 68.6 per cent of the total potential horse-power development in the United States. Of these California, Oregon and Washington have a potential development of 33.6 per cent, while but 17.5 per cent has been actually developed. Mr. Britton concludes his articles by urging the Chambers of Commerce of various cities of California to use their influence for a greater development of water-power.

A University Chamber of Commerce

ONE of the most helpful devices employed in the foreign commerce course of the University of Notre Dame is the actual functioning of a chamber of commerce. The membership of the Notre Dame Chamber of Commerce consists entirely of students. At first, membership in the chamber was optional, but now students are required to become members and participate in the meetings. The general organization is in charge of a director, who appoints various general committees from time to time as work may be found for them to do. The committees that have been most active are those on publicity, college spirit, charities, Roosevelt memorial, and entertainments. This novel idea of injecting practical business into the classroom has been found to be highly satisfactory.

Americanization in Philadelphia

THE Americanization Committee of the Philadelphia Chamber of Commerce has mapped out a definite program for carrying on the work of Americanization in Philadelphia which undertakes to accomplish six objects. They are:

To promote factory Americanization.

To form English classes in the factories.

To make a survey of city Americanization activities, and to coordinate all community agencies.

To establish a free information and advice bureau, and an assistance department for immigrants.

To assist in the securing of naturalization papers.

To promote better living conditions and better working conditions.

Better Business Bureau

REALIZING that a Better Business Bureau, the aim of which is better advertising, has a direct cash-drawer value, the Denver Civic and Commercial Association has undertaken the establishment of such a bureau. Such bureaus have been found to be successful in twenty-five cities.

The Log of Organized Business

First meeting of the Board of Directors of the International Chamber of Commerce—Other activities of trade and business bodies

THE FIRST meeting of the Board of Directors of the International Chamber of Commerce was held in Paris on October 11. A. C. Bedford, of New York, who is one of the vice-presidents of the Chamber of Commerce of the United States and who is also vice-president of the International Chamber, was in attendance at the board meeting. Among the important matters affecting foreign trade that came before the members of the board were:

A report regarding reconstruction as transmitted to the Secretary of State of the United States and the Prime Ministers of all countries; members of the League of Nations and those invited to become members; duplicate taxation, governmental expenditures, Foreign Credit Interchange Bureau, credit facilities, foreign banks, unfair competition, customs and tariffs, export and import embargoes, creation of a bureau of international statistics, raw materials, port facilities, trade terms, passports, subsidies, maritime laws, indemnities, exchange, banking facilities, reform of calendar, weights and measures, statistics of production, clearing house, production, cooperation between capital and labor, statistics of raw materials and finished products.

Presenting the Chamber

FIRST-HAND information of the work of the National Chamber was carried to business men in various parts of the country during the past month by E. W. McCullough, head of the Fabricated Production Department of the National Chamber. Mr. McCullough addressed six separate meetings of business men.

On the first of September, he addressed the National Gas Engine Association at the Congress Hotel, Chicago, where he spoke chiefly on the work of the recently created service departments of the National Chamber. The business men present manifested much interest in the cost accounting work taken up by the Fabricated Production Department.

On the eighth of the month, he spoke to the American Washing Machine Manu-

facturers at the Sherman Hotel, Chicago, on the subject of "Unjust Cancellation of Orders."

On the thirteenth, he addressed the Secretaries' Forum at a noon-day meeting organized by Mr. Van der Vries, central district secretary of the National Chamber, at Chicago.

On the sixteenth, he spoke at the convention of the American Refractories Manufacturers Association at the Clifton Hotel, Niagara Falls, Canada.

Mr. McCullough was in Wilkesbarre, Pennsylvania, on the twentieth and twenty-first, where he assisted the Chamber of Commerce of that city in a two days' membership drive.

On the twenty-fourth, he represented the Fabricated Production Department at the annual dinner of the National Association of Cost Accountants at the Traymore Hotel, Atlantic City.

Detroit Alarmed at Loss of Workers

ALARMED at reports that high rents and living costs are driving workingmen and their families from Detroit by thousands, the Detroit Board of Commerce is about to make an investigation with a view to curbing the exodus, if it is possible. A thorough canvass of the city and its manufacturing plants will be made. It is estimated that people have been leaving Detroit at the rate of 10,000 monthly for the last four months, while newcomers arriving total only 2,000 monthly.

A New Paper

THE Chamber of Commerce of Zanesville, Ohio, has just issued a monthly organ with the preliminary title of "Name It." It is making a canvass of its membership for suggestions for a permanent name for the paper.

The Soul of a City

THE soul of a city is a wonderful thing. It is that indefinable spirit that sets a city apart from any other city. It is the composite spirit of the people who live in the

For a Bigger, Better Stellarville

A more or less reliable report of an irregular meeting of an Eskimo Chamber of Commerce held at the igloo of the Board of Trade under the lights of the Aurora Borealis

By E. J. (STROLLER) WHITE

Former Speaker of The Alaska Territorial Legislature

THE NATION'S BUSINESS offers here the minutes of a recent meeting of the North Star Chamber of Commerce of the Eskimo village of Stellarville. The transcript arrived with this appended note from the author:

"This is a free translation of the minutes recorded on birch bark. I vouch for the correctness of the translation."

Unfortunately, Mr. White neglected to send the original document, or if he did, it had not reached our office at the time the magazine went to press. It may be that a delay of the mails, etc., etc. We are publishing the report anyhow, secure in the knowledge that our readers can't prove—or at least, won't go to the trouble of proving—that it isn't so.—*Editorial Alibi.*

The Minutes

THE following, borrowed for the occasion from the song of Hiawatha, prefaced the resignation of Eskimo, Chief Whosoever Will, as president of the North Star Chamber of Commerce, at the regular monthly meeting:

"I am going, O my people,
On a long and distant journey;
Many moons and many winters
Will have come and will have vanished,
Ere I come again to see you."

Continuing in a less poetical but more practical vein the resigning president thus addressed the organization:

"You fellows know me and you know that when I was in the sap-rising period of young manhood fifty snows ago, I always played firstbase no matter what the game was. All along the coast from Cape Nome to Herschel Island I was known and feared."

"But now that the impetuosity of youth has given away to wisdom and rheumatism I desire to lead the simple life. Where I once gloried in disputing the right of possession of a cake of ice with a polar bear singlehanded and alone, I now find pleasure in communing with the spirits of my departed fathers that stalk the beach at midnight. But how, I ask, can I or any buck have peace of mind and time to commune with departed spirits when he has seven squaws in his igloo? Answer me that." (No answer from the benches which were solid chunks of ice.)

Continuing, the speaker said in part: "To obtain the peace I seek, it is up to me to act and act at once, as a long winter is now here. I have, therefore, requisitioned the fastest dog team in the village and ere another two eats shall have come and gone I will have departed."

"The foregoing are my reasons for resigning as president of the North Star Chamber of Commerce, my res-

ignation to take effect at the conclusion of this session. I have nothing further to say except that I thank the members for the many courtesies they have shown me during my incumbency of the position and, no matter where I may go—to the Diomed Islands or to the bleak and inhospitable shore of Siberia—this organization will ever be cherished in my now shriveled heart. We are now ready to proceed with the regular order of business."

On motion of Fish Grease James, seconded by Woodtick William, the resignation was accepted and the secretary was ordered to suitably emboss a page in the birch bark records as a token of the respect in which the outgoing president was held. What was to be put on the page was left to the discretion of the secretary.

The following resolution was introduced by One-eyed Sam:

"Whereas, owing to the lack of harmony and concert of action among the squaws of our village, it being known to each and all of us—we being all married and some of us very much so—that no one squaw thinks alike two times and no two squaws think alike one time, there is no disposition on the part of our klootches (squaws) to select a common ground on which to dump the trash, and rubbish of the camp,

"Whereas, if we as individuals attempt to exercise authority in our respective igloos in this matter, we will only be calling down wrath upon our heads, for Perversity—thy name is squaw;

"Now, therefore, be it

"Resolved: That it is the sense of the North Star Chamber of Commerce that the village of Stellarville shall create, ordain, install and dedicate a common trash heap, and that our various klootches be gently but firmly remonstrated with for depositing rubbish, whatsoever its nature, other than at the spot designated by this body. And further be it

"Resolved that hootchinco—that substance called by the white man "whiskey"—being

under the ban throughout the country, it is the sense of this organization that we urge upon our klootches that they cease indulging in the same, that they turn out their toes, hold up their heads and try to be somebody."

Considerable argument followed the reading of the resolution, and while it was the consensus of opinion that its passage would be a good thing for the community, the discussion revealed the fact that those present did not care to take any steps that were so sure to antagonize the female element.

Scar-faced John moved to lay the resolution on the table until the next session. The motion was amended by Father Abraham, substituting the word "under" for "on." The meeting then took up the further order of business.

The proposal for the establishment of a credit bureau to protect the locality from deadbeats moving in from other tribes was vociferously adopted.

It was also voted to extend a cordial invitation to the National Palm Leaf Fan Company, Ltd., to put up a plant at Stellarville. In view of the size of the pay roll that the new enterprise would bring to town, the concern was offered a free site and exemption from taxes for ten years.

Penquin Mike—who has been repeatedly criticized for alleged unprogressive tendencies—sought to stay action on the last proposition by pointing out that the climate of Stellarville and the fact that it was so far removed from the source of raw materials made it unsuitable for such an industry. In a masterly reply the chairman charged that Mike has been bought off by the neighboring settlement and that he was deliberately trying to interfere with the logical growth of Stellarville industries. The vote was unanimous in favor of the fan factory.

Before adjournment the resolution in regard to the consolidated rubbish heap was withdrawn from under the table. After the members had relieved themselves of all ingrowing oratory on the subject, it was decided that, instead of putting it in the form of a resolution, the retiring president should make the proposition in the form of a parting recommendation.

This he finally agreed to, with the stipulation that it should not be made public until he had put two suns' journey between himself and the klootches of Stellarville.

This compromise was accepted and the meeting adjourned.

Chief Whatsoever Will signed the birch bark and immediately afterward hit the trail and disappeared in the direction of the Aurora Borealis.



Scar-faced John moved to lay the resolution on the table

Planks for Posterity

Something of the mighty task facing Colonel Greeley, our new Chief Forester, who is charged with the job of guarding the industry of the future against a timber shortage

By JAMES B. MORROW

IN CONSIDERING the case of the master of the forests—otherwise the life, outdoor experiences and grave responsibilities to every man, woman and child in the nation of Col. William B. Greeley—it will be interesting, perhaps, first to speak of the deep-sea lugger, "H. G. Johnson," bound from Boston to Honolulu.

The ship's cargo consisted of merchandise and sugar machinery for the planters of Hawaii and seventy barrels of whiskey. From Oswego, in New York, before the barge sailed, had come Frank N. Greeley and his family. He was in bad health and hoped that a sea voyage and a change of climate and business might restore his strength and advance his fortunes.

They—the Greeleys—took passage on the "H. G. Johnson" and were the only passengers. Now, if Frank N. Greeley had not gone to California, by way of Cape Horn and Honolulu, his son, William B., never, in all probability, would have become chief of the Forest Service of America, which high office he now holds, nor one of the really fine soldiers in the war with Germany.

So the voyage of the "H. G. Johnson" is properly the initial, and pivotal fact as well, of this article. The ship, sailing south for thousands of miles and then north and west for thousands of more miles, was at sea five months, all told. When William B., aged eleven, was leaving the lugger, the captain said: "You may stay with me and I'll rate you in my crew as an 'able' boy."

Prunes Their Specialty

THE testimony of the captain also is worth mentioning. Another vessel took the Greeleys to California, where, in Santa Clara County, a fruit farm was purchased. There, on that fruit farm—prunes, the principal specialty—William B. worked and lived during his boyhood. But, a propensity controlling, he made his way to the mountains, not far distant, and spent his idle hours with their inhabitants—trees and wild animals.

At the University of California, where he helped to finance his four years of study by working on fruit farms and ranches and by baling hay in the Sacramento valley, which was heated like a desert, he read the story and the bulletins of Gifford Pinchot. The soft murmur of the forests straightway became a commanding summons.

With funds earned as a teacher in the high school of Alameda, in the year 1902, William B. Greeley began the study of forestry at Yale. Before doing so, however, he sought the counsel of Bernhard Eduard Fernow, that great old Prussian of the woods, who was then lecturing at Cornell. "Well," said Fernow, with the bluntness of his race, "your legs are long enough to carry you over the logs."

Graduated at Yale at the age of twenty-five, William B. Greeley took and passed a civil service examination and was sent by the National Government to California as an

SOON after our October number came off the press, Mr. Norman T. A. Munder, one of America's great printers, called us up from Baltimore.

"Is THE NATION'S BUSINESS the nation's business of today, or the nation's business of the future?" he asked.

We didn't quite get what he was driving at; he continued:

"Your cover of the lumbermen cutting down the tree is attractive—but it is decidedly of today. What you should have had was a man planting a tree. I will contribute \$50 toward the expense of such a painting if you will use it."

We were glad to be able to tell Mr. Munder that if we did not run such a picture in the November issue, we would at least devote a leading story to the future of our forests. And here it is.—THE EDITOR.

inspector of forest lands. A year afterward he was made supervisor in charge of the Sequoia National Forest. From 1908 to 1911 he managed the public forests of Montana and Northern Idaho.

Those—1908 to 1911—he thinks, were the three golden years of his life. On horseback and with a pack animal bearing his food and tent, he lived half the time in a saddle, traveling a region whose area equals that of Connecticut.

Then Washington sent for him. From 1911 to the summer of 1917 he directed the timber sales of the government and the reforestation of public lands. When General Pershing had completed his study of France, following the declaration of war, he asked for a body of experienced lumbermen. Henry S. Graves, Chief Forester of the United States, and William B. Greeley recruited this force and took it across the Atlantic. They were commissioned as lieutenant colonels of engineers.

Graves returned to this country early in the war and Greeley was left in direct command. At the signing of the armistice, the United States had 21,000 uniformed lumbermen in France. They were operating 95 logging camps in the French forests, were sawing 60,000,000 feet of lumber a month and getting out 250,000 railroad ties, besides immense numbers of telegraph poles and piles and entanglement stakes, to which barbed wire was to be attached. Small sawmills followed the infantry and artillery up to the battle lines.

Colonel Greeley served twenty-three months with the troops at the front. His own government awarded him a citation for meritorious service, France gave him the ribbon of the Legion of Honor, and Great Britain made him a member of its Distinguished Service Order.

When Colonel Graves, after the war, resigned as Chief Forester of the United States, Colonel Greeley got his place, and he is the officer today who, for the people, is managing 154 million acres of public forests, east and west, but mainly in the west, including

twenty and a half million acres in Alaska.

If all the forest land owned by the government could be brought into a single tract its boundaries would be as large as the combined boundaries of Delaware, Maryland, New York, Pennsylvania, Ohio and Illinois. Such, if the reader will look on the map, is the understandable size of the actual forest lands owned by the United States.

But the tract is not all trees. There are rocks, crags and canyons, and vast stretches that lie above the timber line, where such things as can grow are stunted and twisted and sheared into monstrous shapes by the winds. There is much burned-over land also on which new forests are being developed by nature and by man.

Under the law, Colonel Greeley is administering this rich and great domain. His counsel is written by Congress into the statute book of the

nation. He is, indeed, the guardian of a property, the value of which, in dollars, comfort and utility, is immeasurable. Besides, he is the adviser of states, corporations and individuals. His task, and no task is more vital to the people, is to maintain the wood supply of the country, to use it economically and to safeguard the well-being of this nation in the years to come.

As the rough-and-ready old Prussian forester said, he has the legs for it; they are just as long and muscular as they used to be. In the economy of matters, legs have been neglected by statisticians and philosophers. Merely as supports to the human superstructure, the stomach, lungs, head and so on, they are worthy of more description than they ever have received.

Also the Nose for It

ALSO to mention the next feature predominating in visibility, the Colonel has the nose for it. The nose has had its share of publicity in literature and history, and invites further comment, but the temptation is resisted and only this much will be noted: The Greeley nose stands out, noticeably, but it is thin and well-shaped, is slightly and not unsightly, and any one could wish for its duplicate, which cannot be said of large noses generally—or of some other kinds.

A six-footer, eyes a mixture of gray and brown, hair black, body lean, face tanned in France and Alaska, overlying the permanent tan of the mountains, the chief forester, at forty-one, in enthusiasm and vigor, as well as in technic and capability, meets unafraid the mighty job that he has in hand.

The word "mighty" is used not carelessly. There are 276,000 manufacturing establishments in the United States. A fifth of them—55,200—must have wood or shut up shop for want of a necessary primary material. These establishments employ 1,130,000 workers.

"Of the nation's industries," says Carlile P. Winslow, director of the Forest Products Laboratory at Madison, Wisconsin, referring to lumber and wood-using concerns, "they

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STRAIGHT LINE METHODS

rank second in invested capital, first in labor employed and second in annual value of products."

With no wood, the United States industrially would be as barbaric as it would be without iron. "You rise in the morning from your wooden bed," says Dr. Winslow, "and walk about on the wooden floor of your wooden home." The soap one uses in one's bath probably contains a wood product and the handle of one's shaving brush was once a part of a limb of a tree.

At breakfast, Dr. Winslow goes on to say, "you sit upon a wooden chair, in front of a wooden table and read the daily news from a paper made of wood pulp and received over telegraph lines supported by wooden poles."

Thence onward through the day, at every step and act, almost, one's use of wood is necessary. Food is sent to market in wooden receptacles, over rails resting on wooden ties and in cars made of wood. So is clothing. Human beings do not eat wood at present, but a chemical process is being worked out at the Forest Products Laboratory at Madison to convert sawdust into food for cattle.

Men of figures say that more wood is used in the United States than in any other country. Most of the dwellings occupied by Americans are made of wood, while brick and stone houses, of course, have wooden floors, doors, window frames, stairways and so on.

Each man, woman and child, in 1906, used 516 feet of lumber. The quantity dropped to 300 feet in 1918. By lumber is meant wood—wood for buildings, machinery and all purposes. Over half of the wood cut and sawn is for dwellings, mills, factories and other structures. Out of the forty billion board feet cut yearly about twenty-eight billion board feet go into the construction of buildings.

Broadly, apart from buildings, wood, soft and hard, in the United States, is used for railway cars and ties, furniture, fences, vehicles, agricultural machinery, paper, handles and veneer. Two years ago the railways of the countries purchased about one-seventh of all the lumber that was produced, including 87,500,000 ties.

Farmers, the railways and other users took nine hundred million fence posts and telegraph and telephone companies took four and a quarter million of poles; and each pole, it must be remembered, had once been a tree.

Paper makers for the past five years have used an average of 5,300,000 cords of wood annually, a part of which was imported. One newspaper alone each twelve months consumes the spruce of 7,500 acres, and spruce that has been growing for a hundred years.

The furniture industry is one of the largest in the country. Chairs, tables and beds are as necessary to the poor as to the wealthy. Anciently, say fifty years ago, the center of the industry was the northeast. Virgin forests of hard wood were to be found in that part of the country.

When the forests were cut, furniture makers moved into the west. Among the pines of Michigan and other States grew fine qualities of maple and beech. There were thousands of walnut trees in Ohio and Indiana. While the high-grade hard wood supply is rapidly

Large factories have been established for their production and a great deal of capital has been invested in the industry. Northern forests once contained thousands of ash and hickory trees, but they long since were cut and now the supply of such woods is, for most part, obtained in the south.

Competing with handle makers for ash and hickory, and vigorously, are the manufacturers of vehicle and agricultural implements, who are also large purchasers of oak. These concerns have mills and buying organizations in the south and are even canvassing the wood lots and fields of the north.

A huge forest each year is also required to supply the nation with barrels, boxes and crates. Tight barrels for oils and other liquids require 286 million staves and slack barrels for flour, salt, cement, vegetables, etc., require more than a billion staves. Headings, too, must be made for all of these barrels, and around the slack barrels are a third of a billion wooden hoops.

Millions of boxes and crates are manufactured yearly and in them and around furniture, pictures and other articles are placed 200,000 cords of wood in the form of excelsior. Meanwhile, that is to say, every twelve months, a hundred and ten million cords of wood are burned as fuel. Likewise a million and a half piles are driven and a quarter billion cubic feet of timber is placed in mines. A million and a fourth cords of wood are used in the manufacture of tanning extract and more than a million and a half cords for the manufacture of wood alcohol and other distillates.

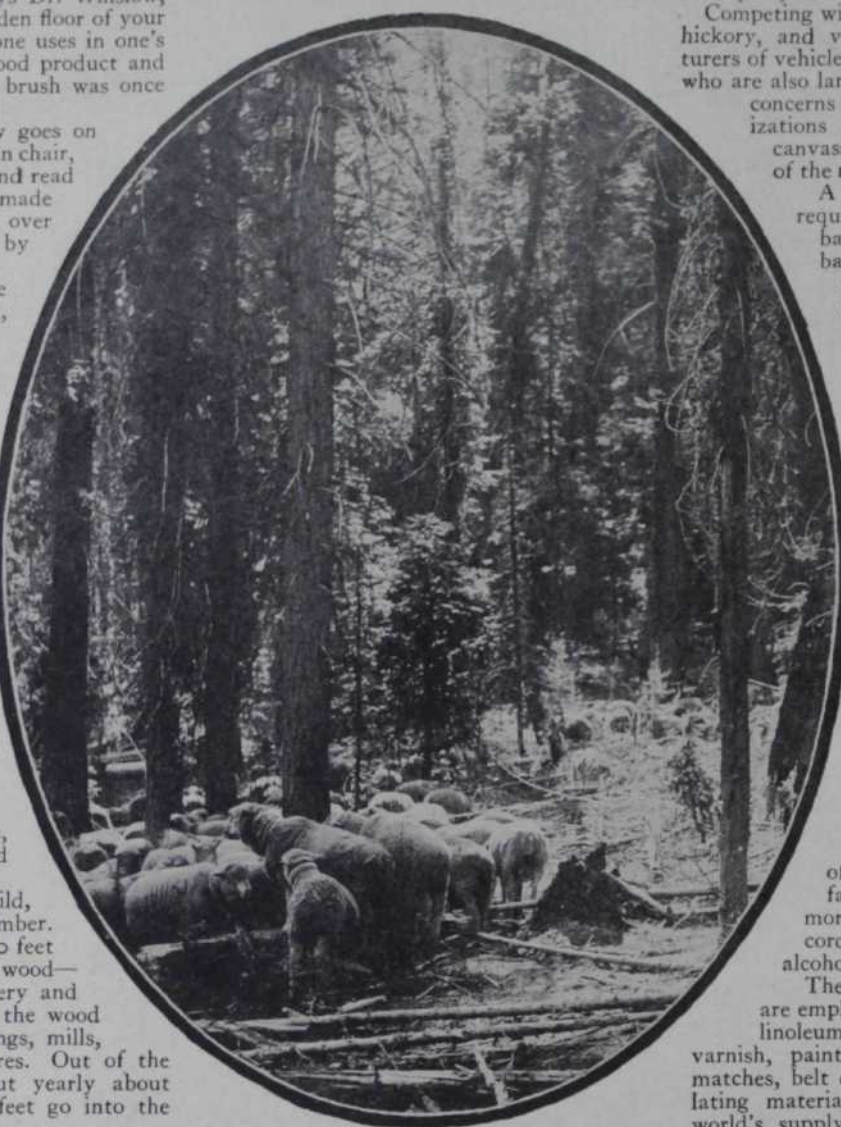
The products of American forests are employed in the making of roofing, linoleum, sealing wax, fly paper, soap, varnish, paint, printing ink, shoe polish, matches, belt dressing, wall-board and insulating materials. Eighty per cent of the world's supply of turpentine and rosin is obtained in the United States—twenty-five million gallons of turpentine yearly and eight hundred and thirty-four million pounds of rosin, principally from forests of the south.

Wood, then, in its story is the story of American civilization. It is the bread and butter and the culture of a large part of the inhabitants of the United States. The buzz-saw, therefore, should be music and not sound and in the planing-mill one should find melody instead of noise. The material foundations of the nation were laid with wood—with ships and buildings—and stockades of trees protected the colonists from the Indians.

Three-Fifths Gone

THREE-FIFTHS of the timber of colonial days, Colonel Greeley says, is gone. So far as expert men can estimate, the forests of this country, when the Declaration of Independence was written and put forth, covered eight hundred and twenty-two million acres. "Over two-thirds of this area," again to quote Colonel Greeley, "has been culled, cut-over or burned."

"There are left today," he says, "about



The Forest Service works to increase the general usefulness of the 154 timber preserves and at the same time protect their future. Here is one use to which they are being put. The national forests furnish range for about 8,500,000 sheep and 2,375,000 cattle and horses.

diminishing, still the furniture industry requires and obtains one and a fourth billion feet yearly.

Veneer, sawn from red gum, white oak, maple, birch and basswood, totaling 780 million board feet annually, is used in the manufacture of furniture and musical instruments. Only clear logs—that is, logs free from knots—sixteen inches or more in diameter at the small end can be made into veneer.

While furniture manufacturers and the makers of veneer are hunting the forests for woods necessary in their business, other sharp-eyed explorers are scouring the country for prime hickory and ash trees, out of which to make handles for axes, pitchforks, scythes, mattocks, saws, chisels and so forth.

American handles are the best in the world and are sold in many foreign countries.



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one hundred and thirty-seven million acres of virgin timber, one hundred and twelve million acres of culled and second-growth timber large enough for sawing, one hundred and thirty-three million acres partially stocked with smaller growth and eighty-one million acres of devastated and practically waste land."

Such, stated in brief and comprehensible terms, is the present timber capital of the nation. Some of it is owned by the government, otherwise the public, and the remainder of it by individuals, partnerships and corporations.

"We are cutting more of every class of timber than we are growing," Colonel Greeley declares. "We are even using up the trees too small for the sawmill upon which our future lumber supply depends three and one-half times as fast as they are being produced."

Into this depressing picture Colonel Greeley unconsciously and indirectly portrays his own responsibilities. To him, more than to any other man, office holder or private citizen, must the country look for the protection of one of its greatest and most indispensable interests. Laws control the public forests. Only trees that have been marked by government foresters can be cut. Thousands of individuals and two hundred and fifty large owners control the rest of the timber in the United States. One can do what one likes with one's own grove or forest, except to burn it down and place in jeopardy some other man's property.

Always a bird in the hand is worth two in the bush and the instinct of a miner, a lumberman, a merchant or a manufacturer, as every one understands, is to take the present profit and to leave his grandchildren, if he ever thinks of them, to shift for themselves. That philosophy, generally, is sound.

For years public-spirited men, Roosevelt chief among them in his day, have appealed to the patriotism of forest owners and, to their honor, not in vain. The burden they took up must now be borne, principally by Colonel Greeley. In speeches and papers and with suggestions he is endeavoring, first to save the forests and then to renew them—to save them in the name of America and to renew them in behalf of posterity.

"Fire," he said to the writer, "is the one big problem." He would "forget everything else for the next ten or twenty years."

"If," he went on, "we could get our forest fire losses, our forest fire hazard, under control so that it would represent but one of the ordinary business losses, averaging a small per cent over any period of time, we would get the timber growth on an enormous scale on our cut-over land."

In 1918, the incomplete records show, there were twenty-five thousand forest fires and last year two thousand more. These fires burned the trees on nineteen million acres of land. The nation now owns one-fifth of the timber lands in the country. Colonel Greeley thinks that the area should be increased to one-half, by purchase, the new tracts to be well distributed and given protection against

fire, as a safeguard to timber owned, publicly and privately.

"Forgetting everything else" except fire is merely, however, a phrase of emphasis. Reforestation would go on as usual. From ten thousand to twelve thousand acres are yearly being planted with young trees on ground which would not be reforested naturally.

Nature, of course, ordinarily takes care of its own interests. It scatters millions of seeds in every forest, so many indeed that squirrels and other rodents cannot eat all of them. Some of the seeds sprout, root and become trees. Thus nature, if let alone, planting a forest, continues it, as the old trees die or are blown down or struck by lightning.

Man, red or white, starting a fire, destroys a forest. The trees are burned and the seeds are killed. The national government grows new trees in forest nurseries and transplants them, one thousand or twelve hundred to an acre, on land where all vegetation, practically, has been destroyed. In this specialized task Colonel Greeley has become an expert.

Describing the situation as it exists at this moment, Colonel Greeley says: "We cannot cut our per capita use of lumber to one-half or one-third of the present amount if our resources are to be developed and our industrial supremacy retained. And we must ourselves grow the great bulk of the wood we need, for large increases in lumber imports are not possible at reasonable prices."

Herein is told, then, something about the new master of the forests and the tremendous task to which he has set his mind and hand.

The Nation's Business Observatory

The Ford monkey wrench in the automobile machine—Dropping prices and the ultimate consumer—Reawakening Germany and the threat of competition—The campaign for tax and tariff changes is already on

PPRICE REDUCTIONS, made or threatened, are stirring the business world. The announcement of cuts by Henry Ford and other automobile makers served to set off the fire-works, and the business press and the newspapers are asking "what next?"

What should be the attitude of the retailer on price cutting? Here are presented some opinions from those who watch closely his interests and who warn him that he cannot afford to go against the current, that he must take a loss for future gain.

Ford Sets an Avalanche of Price Cuts in Motion

HENRY FORD, dramatic as always, set not only the business world but the buying public by the ears by his sudden announcement of a reduction in the prices of his passenger cars and trucks. Not since John Wanamaker made his "20 per cent" cut last spring has any business move caused so much discussion. The effects were felt not only in the automotive industry but in every branch of trade.

Typical of the feeling of shock was the statement made about ten days after the Ford bomb landed by a seller of heavy furniture in a large department store.

"Do you know," he said, "the business here stopped as if it were chloroformed the day that Fords went down."

The mental process of the buyers is not hard to follow. Almost anything might happen to prices, they felt, and it was well to go slowly. No man relishes buying something which he proposes to use for years only

to find a few weeks later that he could have saved by waiting.

It is that feeling that led the editors of automobile trade papers to give the same advice one does to the small boy on the edge of the swimming hole:

"Jump in and get it over."

Typical of this sentiment is the following from *Motor World*:

There will probably be other price reductions and if they are to be made they should be made now, in the interest of the producer and merchandiser. Where reductions are not to be made the word should go out now, from manufacturer to dealer and so on to the consumer, so that the dealer may lose no time in resuming sale of his product on the basis of value and a maintained price. But in either case the decision must be based on facts developed after careful study of the situation, not on sentiment.

The public is in a state of speculation—its attitude is one of "What's going to happen next?" The industry, all along the line from maker to retailer, must meet uncertainty with certainty.

The same paper gives this warning to the dealers whose cars are to maintain prices:

As the campaign ends and another session of Congress draws near, there is a renewal of discussion of tax and tariff revisions. Some enlightening opinions are given in this number of the Observatory.

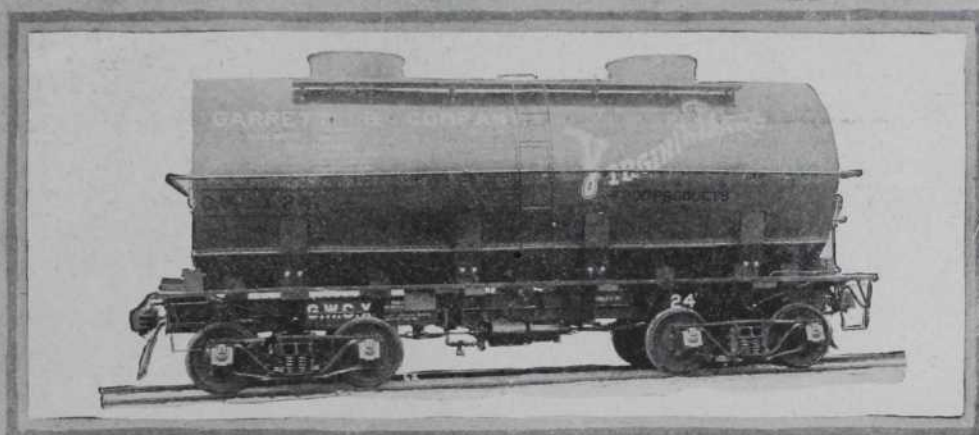
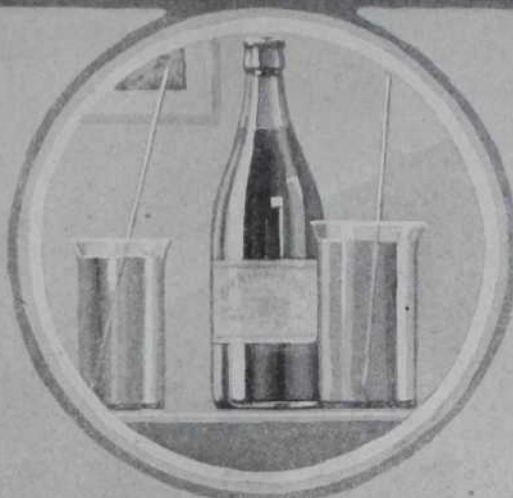
Another question which is much in the mind of the business world is the renewal of German competition. The textile and dye trades are immediately concerned, but there are others which see new problems which they must be prepared to face.

The chief problem for dealers in cars whose prices are maintained will be to convince prospects that there will be no reductions on these cars. To aid dealers in carrying out this task, which is necessary to a resumption of sales, manufacturers should announce definitely that their prices will be maintained—and do it as soon as they can safely make up their minds. After announcements are made there naturally will be a lull in sales for two or three weeks, while the public cools off from the excitement induced by the price reductions. After that, in the opinion of several of the country's largest distributors, dealers will be successful in a ratio based on their selling ability.

Motor Age agrees that "disposing of the price matter will benefit business materially," and adds, "Let's have it over with." This is its answer to the universal question, "Are all prices going to be slashed?"

It seems safe to assert that there will be some reductions in automotive lines in the near future, but, as for any general "slashing" and getting back to 1916 prices, it seems rather improbable. Some manufacturers can and will reduce their prices. Others can't and won't. After the first effect of the Ford cut has worn

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Tank cars are vital to this work of forwarding civilization through their application to the shipment of basic ingredients of explosives—acetone, alcohol, ammonia, benzol, ether, toluol, glycerin and carbolic, nitric and sulphuric acids.

Standard Tank Cars constantly are on the main lines to the manufactories of explosives, because they are specially constructed with mechanical refinements that insure the safe transportation of each and every liquid chemical.

*Tank cars built, repaired and rebuilt, sold and leased.
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other detailed and engineering information.*

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Standard Tank Cars

off the reductions are likely to come more conservatively. Ford should be considered as an exception and not as typical of the automotive manufacturers.

Ford is a long way from his 1916 price, which was the low-price period in this industry. He raised from \$360 in 1916 to \$575 in 1920, an increase of 60 per cent. He has now come back to \$440, for the touring model, which is still 22 per cent above the so-called "pre-war price."

An interesting account of how the cut affected Detroit is contained in a dispatch from Detroit to *Automotive Industries*, part of which follows:

To the direct question as to whether many cancellations have resulted, manufacturers almost to a man have declared they were inconsequential. Investigation among the dealers, however, and rumors that filter through from the conference rooms at the factories, make it apparent that cancellations are giving manufacturers grave concern.

Bankers admitted today that the action would reach far afield and would have its effect in industries seemingly unrelated to automotive manufacturing. "It is a question," said a banker, "if Ford's action will not precipitate a decline in every commodity market, and that condition if it can be worked out without disaster means putting the country back on a sound economic basis."

What of the Motor Truck?

DISCUSSING for THE NATION'S BUSINESS the effect on the auto truck business, Joseph Husson, editor of *The Commercial Vehicle*, writes:

We believe that the price of trucks will remain as at the present until there is some definite break in either the labor or material market and particularly in the labor market. Labor cost is one of the biggest items entering into the cost of motor truck manufacture. There seems to be no present indications that the price of labor used in truck manufacturing will decrease within the next several months.

Contrary to the general opinion we do not believe that the reduction in the price of the Ford truck means that the Ford Motor Company will make a smaller profit at the new price than at the old. The reason for this is that the Ford production of trucks is now greater than ever before and with this increased production has come a reduction in manufacturing costs which in our opinion, will enable the Ford Motor Company to sell its trucks at the new price and still make the same profit as before.

We, however, do not believe that the reduction in the price of the Ford truck will have any great effect on the sale of other higher-priced trucks for the reason that the Ford truck is in a class by itself. One thing which the reduction in the price may do is to increase the sale of the Ford truck which was the ultimate aim we believe, of the whole price reduction, in view of the fact that the orders at the present time on the Ford books for both passenger cars and trucks are less than one month's production at the present rate of manufacture.

Turning from the papers devoted solely to the automobile business, there is varied comment, even an occasional scolding of Ford for not having cut prices sooner or reduced them further. *Shoe and Leather Reporter* turns aside from its contemplation of business underfoot to say:

Unfortunately it is too late to run Henry Ford for the presidency with the campaign slogan: "He reduced the high cost of living."

Manufacturers' Record, declaring that "Henry Ford is the shrewdest advertiser in America," adds:

We are glad that Ford has cut the price of his cars; his profits have been entirely too big for any individual concern; his business has run far into the hundreds of millions of dollars, and his income from his business is possibly greater than that of any other man in the United States, not even

excepting John D. Rockefeller. A continuation of the Ford business on the enormous scale of output would, doubtless, give an annual net income to Henry Ford of an amount so stupendous that it could only be named in hundreds of millions. He is reported as selling 1,200,000 cars a year. The automobile people believe that even at the reduced price he will make a net profit of over \$100 per car, which would make \$120,000,000 per year. Some put the figures very much higher. We do not know what they may be, but it is known that Ford is accumulating an enormous fortune at a rate which will ultimately in all probability place him above John D. Rockefeller in the accumulation of wealth.

It might be well to accept these figures a little reluctantly for *Automotive Industries* says:

At one time less than two years ago the factory profit on each (Ford) car was \$21.

The *Boston News Bureau* asks and undertakes to answer a question that has been in everybody's mouth:

Has Mr. Ford been a "profiteer," that he can reduce the price of his chassis from \$525 to \$360, with no reduction in wages or steel?

The evidence would seem to be clear that Mr. Ford, having reached an output of above 100,000 cars a month, has determined to set his cars going without regard to cost. Indeed, it may have been found cheaper for Mr. Ford to move his entire output at cut prices than to manufacture and store or to reduce his output.

Before Mr. Ford cut his prices he told his friends that he was considering a shut-down unless he had more new orders.

With no reduction in labor or steel, this average cut of 25 per cent means that Mr. Ford has for the time being thrown profits to the wind and, either by inclination or necessity to maintain his large outfit, has sold labor, rubber and steel short, and can recover a part of his profits only by a decline in these commodities.

The same view is taken by *The Annalist*, which says:

... That which is taking place with reference to the automobile industry is nothing more nor less than short selling. The interesting question is whether they will be able to cover so as to afford the profit which they seek.

There is no doubt in the mind of the *Daily Metal Reporter* that the drop in prices of automobiles will be bullish in its results:

The action of the Ford Motor Company in slashing prices, far from being regarded as a "bearish" influence, was considered by most of the men interviewed to have been one of the biggest and most important steps taken in the return to normal things since the end of the world war; and the prediction was made that the leadership of the Ford Co. in the return to antebellum normality would be accepted generally by the business world in the very near future.

More dubious is the outlook of *The Iron Age*, which does not see the Ford reduction as one to be blindly followed:

... Mr. Ford's promise to return to pre-war prices for his product by no means represents the possibilities in respect to commodities in general. It is plain that there can not be a return to pre-war prices. If a decree to that effect could be executed it would involve a complete collapse of credit and industry throughout the country. ... The Ford Motor Company's action in reducing prices is creditable and should lead the way to many adjustments, but in general the process of adjustment will be long drawn out. The descent to lower levels will not be smooth or continuous. There will be jolts and rebounds and the various industries will not move at an even pace.

L. L. Arnold, editor of *Cotton*, writes for THE NATION'S BUSINESS this comment on

Mr. Ford's magnanimity and its effect on the textile industry:

It is common knowledge among people who are familiar with mechanical apparatus that when an industry grows to a considerable size and the number of machines sold has anywhere approached the number of cars already placed by Mr. Ford's factory the business in supply parts for repairs composes almost as large a part of the business of the organization as does the manufacture of new machines. A short time ago the announcement was made by Mr. Ford's agents (although not widely mentioned on the front pages of the daily newspapers) that the cost of all repair parts would be advanced around 25 per cent. Then came the wonderful denouement, the great magnanimity of Mr. Ford who thought so much of the dear public that he reduced the prices on his cars to an unheard of extent and, incidentally, got his free advertising. Also, just incidentally, the more cars he sells the greater will be the demand for repair parts on which this wonderful cut has not been made.

The result of Mr. Ford's action has been widespread. In textiles, for example, the market had slumped off, prices had fallen to some extent and orders were scarce. Then the buyers, particularly those in New York who are pessimistic by nature just before a presidential election, began to regain confidence. Orders began to make their appearance and textile prices began to recover some of the losses which they had undergone. Just as this feeling of renewed confidence was beginning to permeate the New York market in a fairly general way Mr. Ford slammed a monkey wrench into the whole works with the megaphoned announcement of his philanthropic cut. This announcement, widely heralded by the daily newspapers again induced that feeling of uncertainty among the buyers from which they have not recovered to date.

When Will Price Reductions Reach the Last Consumer?

THE drop in prices of many raw materials, the action of some of the largest mail-order houses in revising price-lists downward, and the cuts in automobiles are leading the consumer to ask:

"Am I getting all that I should from this?"

The problem of many retailers is presented by Lew Hahn, managing director of the National Retail Dry Goods Association, who says:

It is unfortunate that announcements of price reductions, as they have lately appeared in the press, have been calculated to create in the minds of consumers the impression that these price reductions might be expected at once in retail stores. Obviously, this is not possible, because all retail stores are carrying heavy stocks of merchandise purchased prior to the reductions made by the manufacturers.

To cut prices on merchandise purchased at peak prices would involve a very heavy loss, not only on prospective profits, but in actual capital employed by the retailer in his business.

It is, of course, inevitable that retail prices must follow wholesale prices and, even though the retailers can not at once make such radical reductions as the manufacturers have made, the retailers will certainly reduce their prices on the lines affected so far as the conditions they face will permit.

The *Daily News Record* reports a feeling that this attitude "is the chief obstacle to the continued prosperity of the country," and quotes an authority as saying:

Of all the lame arguments, this is the lamest to put forth at a time like the present. What the country needs is to get down to a trading basis—to knock the water out of everything. The mills have made big reductions. The jobbers have followed. In this connection it may be interesting to point out that, while Mr. Hahn says retailers cannot reduce prices because of their heavy stocks bought "at the top," the same retailers

50 Per Cent More For With 50 Per Cent



Operator in offices of Edward Robertson & Son, Boston, in touch method — so easy on Dalton — "eyes on work and fingers on keys."

Dalton Advantages in Brief

- 1 One machine for all figure work
- 2 Instantly operable by anyone
- 3 Fewer keys — less opportunity for error
- 4 Key-board scientifically arranged for "touch method" operation
- 5 A faster adding machine
- 6 An adding-calculating machine combined
- 7 A machine of broader usefulness



Figure Work 50 per Cent Less Fatigue

Edward T. Robertson & Son of Boston, are a well-known firm of cotton controllers.

A few months ago they found that improvement in their adding and calculating facilities would have to be made if their constantly increasing volume of figure work was to be kept up with.

They installed a 10-key Dalton to meet their larger needs.

Here is a report from Mr. O'Neil, office manager for Robertson & Son, on the result:

"After three weeks of using the Dalton, we conducted a trial of speed. Our operators completed a given set of invoices in an average of 5 minutes, 36 seconds. The best we had ever been able to do with our former equipment was 9 minutes."

Then Mr. O'Neil added this illuminating statement:

"Knowing what I do of Dalton operation now, I should have installed this equipment even if it had not saved us one second in time.

"Formerly, if the girls spent a morning making up invoices, they complained of eye-strain and mental fatigue. They were hardly fit for other work the balance of the day.

"Using touch method operation on the Dalton, the same work is now completed in 50 per cent less time, and without the girls being in any sense tired. They are able to competently do all the other work required of them."

This is the kind of service the Dalton is giving business men the country over—merchant, manufacturer, commission man, jobber, farmer, professional man.

The Dalton has 10 keys only—one for each figure. It is so simple that any one can use it immediately. It is the natural "touch method" machine.

The Dalton is unlimited in its usefulness for figure work. It adds, subtracts, multiplies, divides, figures interest, verifies invoices, cross-foots, tabulates, makes out statements, multiplies whole numbers by fractions, fractions by fractions, adds two totals at once, and performs various other mathematical calculations with a speed and accuracy that is almost beyond belief.

Dalton durability is established, and after-purchase service is available to Dalton users everywhere.

Phone the Dalton Sales Agent in any of the 100 or more leading cities—have a Dalton brought to your store or office. It will cost you nothing to have a demonstration. Or write—our folders contain facts about the Dalton which every business man should know.

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Dalton

Adding-Calculating Machine



A Leader of Men

Back of his energy is sound health, and back of his health is self-discipline that provides for regularity in habits of eating, exercising—bowel elimination.

It is largely this freedom from intestinal poisons that keeps him young; that leaves him free to pursue his aims with mind unclouded and energy unimpaired.

Such health is out of the question for you as long as you are constipated. Laxative and cathartic pills only aggravate and confirm the constipation habit.

Nujol works on an entirely new principle.

Instead of forcing or irritating the system, it simply softens the food waste. This enables the many tiny muscles in the intestines, contracting and expanding in their normal way, to squeeze the food waste along so that it passes naturally out of the system.

Nujol prevents constipation because it helps Nature maintain easy, thorough bowel evacuation at regular intervals—the healthiest habit in the world.

Nujol is absolutely harmless and pleasant to take. Try it.

Nujol is sold by all druggists in sealed bottles only, bearing Nujol Trade Mark. Write Nujol Laboratories, Standard Oil Co. (New Jersey), 44 Beaver St., New York, for booklet "Thirty Feet of Danger".

The Modern Method of
Treating an Old Complaint



Nujol For Constipation

are insisting on rebates wherever the market has dropped.

Everybody has to share in this readjustment. For the retailer to make his nice fat profit on the rise, with everyone else, and then expect to slide out nicely, taking no loss, is silly—and detrimental to the interest of the country.

The *Dry Goods Economist* warns the retailer to watch his step. Buyers, it explains, are reading the reports of price-cutting eagerly and there is no longer what the paper terms "the demand for higher prices." What then should the retailer do? Here is the answer:

While the market was rising few retailers, if any, made up their minds to get "all the traffic would bear"; few proceeded to mark up everything indiscriminately. On the contrary, careful observation on our part showed that the great majority averaged their prices and throughout a long period gave the customer the benefit of the goods the store had accumulated at lower figures. We now urge that retailers pursue an equally constructive course, that as they were willing to be fair winners they should now be good losers and take their medicine where called for. Needless to say, we do not advise any merchant to make cuts which might prove unduly costly to him. What we suggest is that he watch conditions day by day and promptly make such reductions as are essential. Where there is no need for haste he can avail himself of the policy of averaging down just as he formerly adopted that of averaging up.

The causes which led to the hoped for cut to the final consumer are well summarized by B. C. Forbes in an article in *The Public Ledger*, of Philadelphia, shortly after the Ford announcement was made:

Raw materials were the first to break. Wool tumbled headlong. Silk dropped even further. Rubber fell to one-third of its previous price. Leather became unsalable. Cotton persisted in bucking the general trend and in July rose well above forty cents a pound, but it also has since been declining sharply and December deliveries are now quoted under twenty-four cents a pound. A wide variety of miscellaneous materials and commodities have for months been gravitating away from their war-time levels, including, for illustration, cottonseed oil, lard, meats, many chemicals, coffee, sugar, lumber, coke, and even coal in bulk. Wheat is down to \$2.25 a bushel. December corn has fallen below \$1 a bushel for the first time since the war-time rise and September oats are under fifty-five cents a bushel. Moreover, the metal industries, after their phenomenal boom, began some time ago to feel the effect of the downward swing.

Why, therefore, should any astonishment whatsoever be expressed over the price-cutting of finished goods which is now going on?

Will there be more price-cutting?

Certainly there will. There are still a great many lines of goods that have been maintained on a war-time rather than on a peace-time basis. Each and every one of them must inevitably find a more normal level, helped along by the transformation under way in our foreign trade inflow and outflow.

The outlook is for a period of price uncertainty and timid buying. Merchants are always more eager to buy in a rising than in a falling market. Moreover, consumers are in an ugly mood; they feel that they have been gouged, and they are consequently in no haste to buy anything they can get along without.

Pig Iron Prices are Wrong,

The Trade Papers Insist

PRICES of pig iron and of steel need reforming in the opinion of papers which speak for those industries. *The Iron Age*, discussing the sharp divergences within the trade, reaches this conclusion:

Thus, if pre-war standards and relations count, pig iron is too high, even if steel prices are not too high; and if steel prices on the whole are all right the Steel Corporation's prices are too low



"DUSTITE" RESPIRATOR

The necessity
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The "Dustite" Respirator permits free breathing of filtered air in all poisonous or irritating dust, spraying paint and similar operations. Used DRY, and weighs but two ounces. The only respirator approved by The Underwriters' Laboratories.

If you want to increase output in your dusty operations, write for "Dustite" literature. Trial Respirator (sent on approval) for \$2.00.

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The Salesman turns Preacher against fire sin

Comparative Fire Losses
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United States 1919*	\$3.13**
France 99 cents	
England 55 cents 61 cents	
Germany 28 cents	
Italy 25 cents	
Austria 25 cents	
Switzerland 25 cents	
Holland 11 cents	

* Based on 1919 statistics
** Based on 1919 statistics

"Below is a sheet of Johns-Manville Roofing against which I play the flame of a blow torch. Notice it is unharmed by even this hot blue flame. You can do this with any Johns-Manville Asbestos Roofing without effect."



EXTRACTS from one of the many lectures on Fire Prevention by Johns-Manville men:

"The price each of you paid in 1919, as a tax on fire loss in America, was \$3.13.

"This is largely due to the kind of buildings we erect—using inflammable materials.

"We build our towns in a hurry, but they burn down about ten times as fast.



"If you were up in an aeroplane you would realize how defenseless your buildings are against flying sparks. Now flying sparks carry fire from place to place, or we should say roof to roof, and each time one falls it starts a new blaze.

"So, in preventing widespread fires (the bad ones) the roof is the chief factor."

FIRE prevention is one of the most important topics of the day. The press, our public men and our fire authorities all stress the need for action against the tremendous loss that fire entails.

Nor is the plea futile, judging by the interest shown by incidents like the above where townsfolk gather to hear Johns-Manville men speak on the subject.

It is significant too that at the risk of hearing a purely biased talk on the subject, attendance is full and attention rapt.

Such interest is heartening because it bears out our belief that commercial institutions can do much for the common good by honest propaganda, if they are courageous enough to brave the cry, "You have an axe to grind."

We frankly admit that through such efforts Asbestos Roofing is sold. To deny this is to deny our own birthright.

But one cannot conceive of Asbestos and not think of fire resistance. So why not meet the issue on bigger, simpler grounds?

Admitting the need of Asbestos in fire prevention, we have chosen to preach it, sustained in our course by the knowledge that if we wanted to be small, we might sit back and still benefit while fire prevention authorities did it alone.

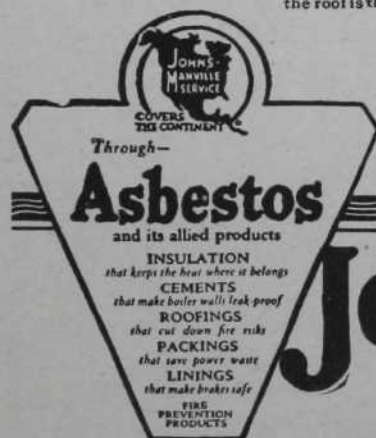
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JOHNS-MANVILLE

Serves in Conservation

Building costs reduced

Stefco Sectional Steel Buildings

Ready for Use Within a Week After Delivery

IN these times of uncertainty, when building material and labor are scarce, and almost prohibitive in price, Stefco Sectional Steel Buildings are solving this problem for manufacturers in practically every line of business.

Stefco buildings are completed in sections at our plants, ready for erection on your

foundation, with your own labor, in a few days' time. This eliminates the uncertainty and expense of building the old way. You know in advance to a dollar what the Stefco building costs. You know to an hour when it will be ready for use. When your Stefco building is erected you have a strong, fire-proof, practical building, at a cost within reason.

Ask Your Engineer

If you do not know construction details, ask your engineer to investigate Stefco buildings. He will tell you that the truss on the Stefco building is a compound Fink type truss—a true truss capable of carrying loads of from 1½ to 3 tons without additional bracing. This truss gives a strength to the Stefco building which insures long life and continued service. Before buying any type of building look at the truss.

Used In Many Industries

Stefco Sectional Steel Buildings are being used in many industries—for manufacturing, storage, warehousing, freight sheds, etc. If you have need for any type of an industrial building, it will be well worth your while to allow us to submit specifications which will show you step by step exactly what we propose supplying, the material used, and the method of construction of each unit. When writing, indicate the use you have for the building, and approximate length, width and height of side walls.

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"The main feature about the Stefco building is that it is a real fabricated steel building, so designed that it is uniform even in its smallest size to its largest size, with the proper weight for its design."

and the independent prices are too high. Apparently the iron and steel market has more to adjust within itself than it has to adjust to bring itself into relation with the average of other commodities. Such readjustment between the two sets of prices for steel products is already under way and promises to go further.

A view, somewhat similar, is taken by *The American Metal Market*, which said some time ago:

Judged by the standards that prevail in ordinary times the recent advance in foundry pig iron in certain producing districts to \$50 or higher, f.o.b. furnace, was a mistake. If the market previously existing was a safe and sound one the price was taken out of that category and therefore the advance would be a mistake. . . .

What is clear is that consumers, as a rule, have been refusing to "take hold" at the advanced prices. The sellers may consider this all right, on the ground that they need to be given time, but that is not the usual procedure in the pig iron market. In the past, when pig iron was advancing it usually advanced rather continuously until it got entirely through advancing.

Another basic industry which hears the call for lower prices and is ready with its defense is paper manufacturing. *Paper* recites the slow increase in production, the low state of the world's stocks, the great foreign and domestic demand, and comes to this conclusion:

With these main facts in mind, it is a certainty that unless the prices of raw materials, the wages of labor, the cost of machinery and equipment, and the expense of transportation, show a decided downward change, paper prices will go higher rather than lower. Thus far, these items still display the old tendency to advance rather than decline.

More Gasoline on Hand but

More Cars May Use it Faster

A SURPRISING feature of the gasoline industry, which until lately has been gloomy over a lessening supply, is a report of a consistent decline in demand at the refining centers with a result, says the *National Petroleum News*, "that at the Oklahoma, Kansas and Texas plants gasoline is backing up to a point where the continued operation of the plants at present capacity is threatened and refiners are offering considerable price concessions in order to move their stuff."

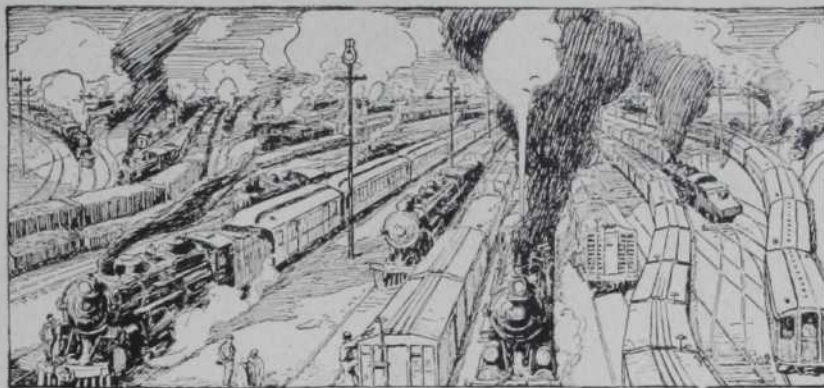
What will the lowered prices of automobiles do to this condition? *Oil, Paint and Drug Reporter* says:

The automobile industry has been somewhat slack recently, but lower prices are certain to mean free buying of cars, and an increase in the consumption of gasoline. Consumers constantly complain of the high price of gasoline, but their complaints do not reduce consumption. The time will come when a person will use an automobile as one uses a railroad train—in order to go somewhere. The day of railroad excursions is past, and the day of joy riding will be a thing of the past some day. However, the people who buy new cars at the reduced prices will keep the wheels spinning and burn up gasoline most freely.

Tax and Tariff Changes that

Business Interests Urge

WITH the presidential campaign near an end, business is beginning to consider new and needed legislation. The whole problem of taxation is sure to come under discussion. It is hardly too much to say that there are growing doubts of the wisdom of the sales tax in place of a levy on excess profits. The Business Men's Tax Committee, which is advocating the substitution, has suggested a conference of all business



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men and would have the Chamber of Commerce of the United States call such a meeting.

The committee has compiled some figures on the amount of tax which would reach the consumer on a number of standard articles. On a man's suit retailing at \$60 it is computed that the total tax from the purchase of the wool to the buying of the completed clothing would amount to about \$1.57, or 2.61 per cent.

One argument against the sale tax is thus voiced by the *Dry Goods Economist*, which says:

While, as above suggested, there are many retailers who have expressed themselves as favoring this form of taxation, there are others who see in it a considerable degree of danger. They feel that if the gross sales tax is adopted by the Federal Government it will be followed by similar taxation on the part of States and then by municipalities. This being the case, there is all the more reason why a conference should be held, so as to elicit the views of representative branches of industry, trade and other business affairs.

The Tariff Cry from the South

THERE is certain also to arise a demand for tariff revision. One of the loudest cries is coming from the south. The industries chiefly interested in this demand for protection from so unexpected a quarter are thus described by the *Manufacturers' Record*, a leader in the fight:

The peanut growers, in convention, have formally put it on record that the industry must have protection or suffer extinction; the American Cotton Association, in convention at Montgomery, has unequivocally taken the position that some way to prevent the importation of Oriental beans, copra and nuts must be found or the cottonseed-oil industry can not survive; the tobacco growers of Virginia are in such straits that Democratic candidates for Congress are promising them protective tariffs, and the issue has become one of such tremendous importance to the whole South that the Democratic Governor of a Democratic State—Louisiana—has joined in the call for a Southern Tariff Congress to meet in New Orleans.

The dye industry also has its claim to present and will base it not only on peace conditions but on the necessity of chemical preparedness for war. *Paint, Oil and Chemical Review*, approving the resolution of the Council of the American Chemical Society, which urged congressional action, says:

England is strongly supporting its chemical industries by a licensing system and the promise of subsidies. France is even more strenuous in its opposition to German control of munitions materials. We as the third great war nation must be consistent in our support of the same policy or become the laughing stock of the world, just as we were in 1914.

Oil, Paint and Drug Reporter raises the preparedness argument:

The knowledge that the chemical industries of the United States are being developed to their utmost, and with that freedom from foreign competition that is guaranteed by the Longworth bill, would serve as a warning to European nations that the United States, though organized for peace, is ready at all times for what may come. There would have been no European war if the United States had been in position to demonstrate to the turbulent nations of Europe in 1914 that she was equipped and ready to throw her national and other resources into the balance on the side of justice.

Danger from British competition is given as the factor which justifies legislative aid for the shoe and leather industries. *Shoe and Leather Reporter*, which sees "silent and hidden tariffs" in England's method of fostering trade, says:

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MAY 15			10.0																								
MAY 15			9.0																								
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It is inevitable that our revenue law will be revised following the inauguration of the new president March 4, 1921, and it is not too early for members of our trade to formulate their ideas. The violent changes in industrial and commercial conditions throughout the world forced upon us by the war have created a new situation which must be considered without regard to old ideas. The "Protection for infant industries" of the Republican party and the "Tariff for revenue only" of the Democratic party will have to go into the discard. The industrial situation of the world has radically changed and forward looking men must change with it.

The hardware industry is another which is disturbed by Germany. *The Hardware News* reports that manufacturers "have already taken steps for tariff revision," and thus justifies their action:

Decreasing exports and rapidly increasing imports show the trend of trade.

The cutlery line is one of the first that will need attention. Already German cutlery, manicure sets, are being sold in this country at prices under the American goods.

And the farmer is not going to be left out. He wants his wheat protected against Canada's grain at least. *Farm, Stock and Home* says:

For many years farmers have been led to believe they were receiving protection by reason of a ten cent import duty on wheat. In those years Canada was raising little wheat.

A relic of the attempt to establish reciprocity was a provision that any time Canada removed its import duty on wheat and flour Canadian wheat was to enter this country free. This was done in 1917, but on account of our price guarantee an embargo was put on Canadian wheat to prevent the Canadian farmer shipping his wheat over the line and getting the United States price.

With the expiration of the guarantee the embargo automatically ceased.

With Canadian money selling at fifteen per cent discount every dollar's worth of Canadian wheat sold on this side of the line is worth \$1.15 when the seller cashes his draft in Canada.

The present situation puts the Canadian spring wheat into competition with ours and will cause a loss to every Northwestern wheat grower.

Legislation to prevent tariff losses due to fluctuation in exchange is suggested by *Textile World Journal*, which asserts that the loss in duties from this cause in the last fiscal year aggregated over \$60,000,000. Joseph F. Lockett, of Boston, is their authority for the figures. The *Journal* goes on to say:

Mr. Lockett holds that loss of revenue, at least, can be prevented by the enactment of statutes that would allow tariff duties to be raised or lowered as exchange depreciated. Not only is this, or some alternative idea, necessary to prevent the loss of millions of dollars of tariff revenue, but also to afford a reasonable measure of protection against the effect of depreciated foreign currencies and the increasing competition of commodities produced abroad under depreciated economic conditions.

Why Doesn't Railroad Labor

Save Up and Buy the Roads?

VOLUMES have been written and more volumes will be written to show that the wealth of the country is not in the hands of the few but of the many; that the real capitalist is the worker. In the *Annalist* W. R. Ingalls recently devoted three long articles to this subject. He mourns the lack of adequate statistics, but finds enough to enable him to reach this conclusion:

In 1916 American wage earners received about 80 per cent of the \$50,000,000,000 produce of American industry in that year, their earnings being divided among 40,000,000 workers at the rate of about \$1,000 each and the sum of \$10,000,000,000,



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Contractors are like trains in this respect, that their delays occur en route and are recorded at the point of destination, not at the point of departure.

It is, therefore, important to check up a contractor's past arrivals before accepting his present assurances.

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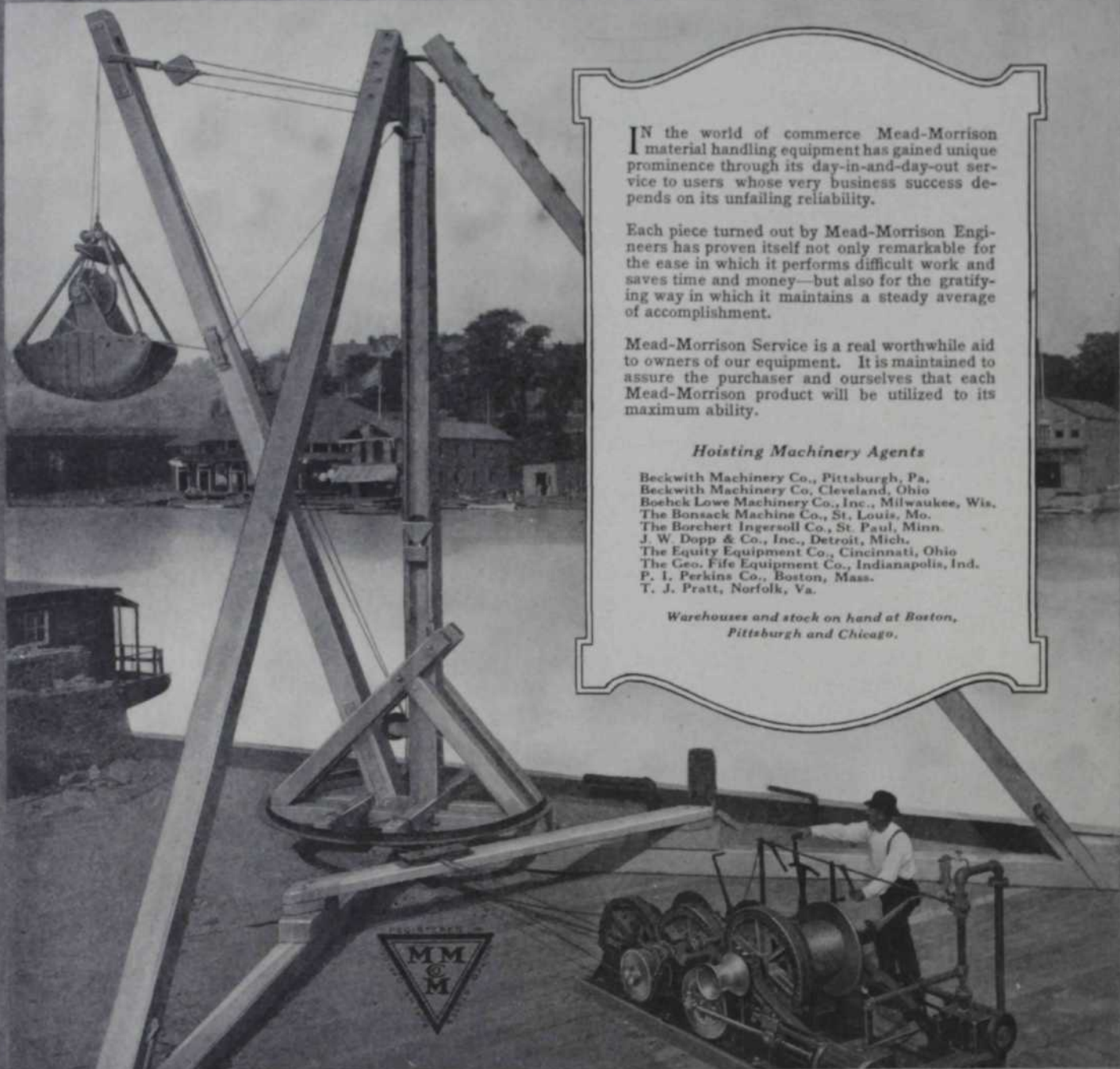
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which was the share of capital, was only about 4 per cent on the wealth of the nation, estimated at about \$250,000,000,000.

Railway Age has a definite suggestion for the worker. It suggests that the men who benefited by the recent award of the railroad labor board buy the roads for which they work. Here's the simple plan:

The wages now being paid to the railway employees amount to about \$3,600,000,000 a year. The advances granted to them recently by the Railroad Wage Board amount to \$625,000,000 a year. They easily could and should save at least this part of their annual incomes. Why do they not do this and adopt a cooperative plan, through their labor organizations or otherwise, for acquiring the ownership of railroads?

The average price at which the stocks of twenty-five large railroad systems were bought and sold in the open market last week (in mid-September) was \$58.50. Taking this as the average market price at present of the railway stocks outstanding, all the stock could be bought for \$3,851,000,000, and one-half of it, or enough to give absolute control, could be bought for \$1,926,000,000. On this basis the railway employees, by saving and investing their recent increase in wages in railroad stock, could acquire ownership of a majority of the stock of all the railroads within three years. The combined outstanding stock of the New York Central and the Pennsylvania in the east, and the Atchison, Topeka & Santa Fe and the Union Pacific in the west, amounts to \$1,417,000,000. If the employees desired to acquire control first of the ownership and management of only these four great properties they could buy a majority of the stocks of all of them at par with their recent increase in wages in 14 months.

Is the German Trade Menace a Real One?—Some Opinions

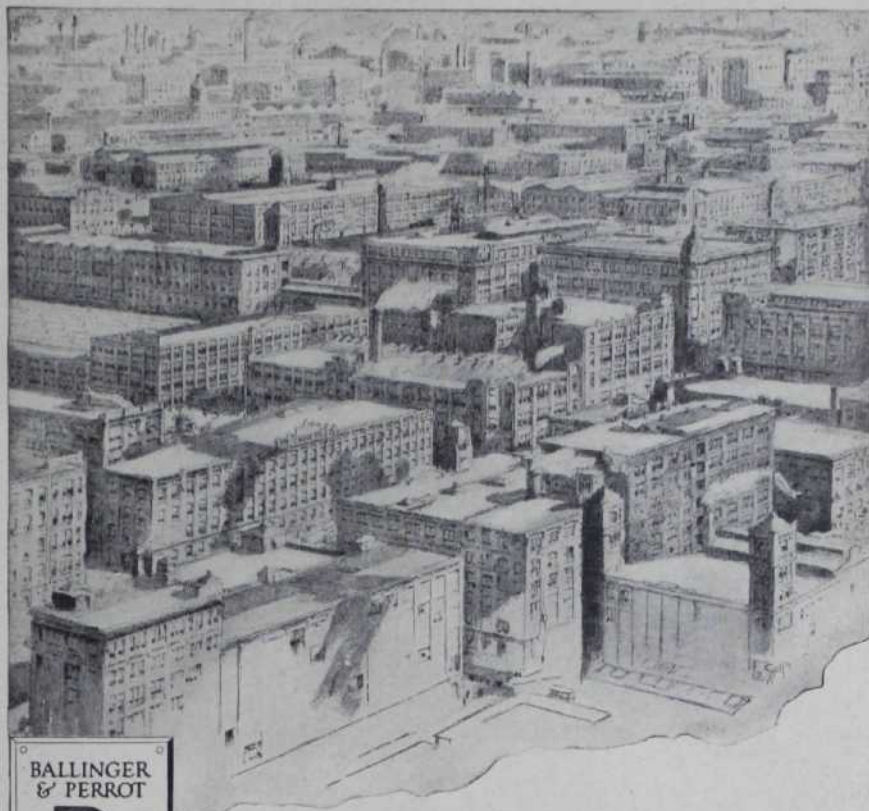
MUCH INTEREST is shown in business circles in the possible dangers from German competition. At a recent meeting of export men the question was under discussion and the consensus of opinion was that Germany was eager to compete for world trade and was ready to meet price competition, but found it difficult to carry out delivery promises.

All that can be done in familiar German ways of enforced cooperation and rigid supervision is being done. How high-handed, at least from an American viewpoint, some of these methods are is illustrated by this incident quoted from the Berlin correspondence of *The Iron Age*:

The new drop in mark exchange, by increasing the cost of Swedish and Spanish ore and generally sending up the price level, has caused an agitation among the producers in favor of putting up pig iron again—this, though only three weeks ago prices were cut the second time since May by about 15 per cent. A commission of the "Reichswirtschaftsrat" (the new "Parliament of Business," which handles economic matters of all kinds) reports unfavorably on this proposal. The receipts from exports of iron and steel, says the commission, ought to supply the producers with sufficient foreign currency to enable them to pay for foreign ore. Further, some of the corporations lately declared large dividends; and in calculating their costs they leave out, proceeds the commission, profits from by-products, such as tar and tar oil, for which they are getting 70-fold more than in 1914.

The same authority describes the iron and steel industry of Germany as stagnant, and because of that condition Germany's coal shortage is less serious than was feared, despite the deliveries to the Allies. A factor in the German industrial outlook is the increasing use of lignite or "brown coal." Krupps and other large companies have partly adapted their works to brown-coal firing.

Much has been claimed for lignite, but *Oil*,



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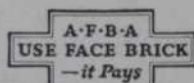
An artistic booklet with attractive illustrations and useful information for all who intend to build. The Romance of Brick, Extravagance of Cheapness, Comparative Costs, How to Finance the Building of a Home, are a few of the subjects treated. Your copy is awaiting your request. Send today.

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Paint and Drug Reporter is sceptical of some of the reports:

The story is that in Germany are inexhaustible deposits of lignite that have never been considered of any value at all; but now—so we are told—a German professor has invented a process by which he is going to extract gas from lignite which is to supply gas turbine engines which run all the railroads of the country, and incidentally in the process there will be all the fuel oil and lubricating oil produced that Germany will need. No more will Germany need coal, it is announced. She will sell that at a high price to foreigners and then bankrupt them by underselling them with goods in the manufacture of which power is obtained ridiculously cheap from the once despised lignite. Also she will get more oil out of her laboratories than the rest of the world can get out of the sands of Mother Earth.

If some German has discovered a cheap substitute for coal and oil he has not only saved his country from impending ruin, but has performed a service to humanity that will place him high in the Hall of Fame. However, there will be no let-up in the prospecting and drilling for oil, while the world is waiting to be shown.

After Mexican Trade

HOW eagerly Germany is reaching across her borders for trade is shown in a Mexico City letter to the *Trade Supplement of The Times*, of London, which says:

Active preparations are now being made to commence the exportation, as soon as possible, of German machinery to Mexico and Central and South America, whilst technical men are to be sent out to make a special study of local conditions and to report upon the modifications that may be required to meet these conditions.

Delivery is one of the most important factors in overseas contracts. A Mexican firm has recently called for tenders for the material for a new pipe line; tenders were invited from a British firm, an American, and a German. The tenders were:

British, 14 months' delivery, \$74,000 (no guarantee that this price would not have to be increased by 10 per cent, owing to unforeseen labor demands).

American, six months' delivery, \$67,000.

German, seven months' delivery, \$62,000.

The difference in delivery secured the contract for the United States firm.

The German textile industry is showing very marked improvement. From Great Britain come reports of alarm on the part of wool and worsted yarn spinners. The imports into England from both France and Germany in June were more than four-fifths of the imports of June, 1913. It is notable that French and German interests are both engaged in the work, the method being as follows:

The yarns are spun from dry-combed tops produced in France, the tops being supplied to a German mill under the credit of a Dutch financing concern. The tops are spun in the German mill for the amount of the cost of wages, plus a certain profit, the money being paid in advance to enable the German spinner to carry on. The yarns are admitted to be splendidly spun, and have found a ready sale in England.

Textile Mercury, a British trade organ, says of the outlook:

The important point is that, as the German mill builds up capital, it will eventually be able to bring the whole of its machinery into operation and supply tops, yarns, and cloth which this country might produce in greater degree but for the adoption of a reduction of hours, amounting to 15 per cent of pre-war working hours, when the operatives were deluded by the appearance of illimitable prosperity that prevailed during the war, and subsequent to the war, when this country had nearly an entire monopoly in wool textile production.

Some indication of the eagerness with which Germany is looking forward to a renewal of trading with this country is given by this

Increasing the Use of Jigs Speeds Standardized Production

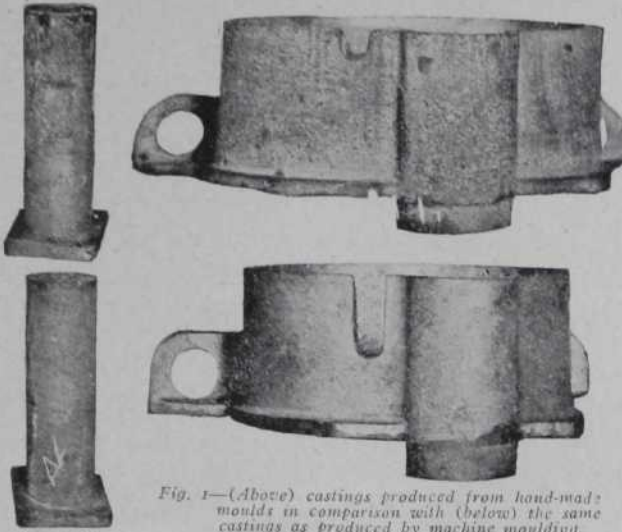


Fig. 1—(Above) castings produced from hand-made moulds in comparison with (below) the same castings as produced by machine moulding.

THE man who coined the phrase "doing it in jig-time" was a musician—not a machinist.

On the other hand, the machinist has put the idea to work at far greater profit than has his musical contemporary.

In point of fact the jig comes close to being the foundation of standardized large-scale production. Therefore, any precaution which either increases the applicability of jigs or reduces time in fitting castings to jigs is multiplied in later operations until it mounts into a saving of first importance. Scores of jobs which in the practice now adopted in machine-shops go to the layout tables could just as safely and far more profitably be jigged.

Just one condition determines whether the jig-work can be widely utilized in a machine-shop or whether the slower, more expensive layout process must be generally employed. It lies solely in the quality and uniformity of the casting. Neither adaptable machines nor skillful machinists can remedy the loss of time occasioned by poor castings.

Past foundry practice was built around a faulty understanding of human capacity which still persists in many foundries. The moulder is asked to perform operations demanding two utterly opposed abilities. First comes the heavy work of shovelling sand and ramming it vigorously into the mould. Immediately he is called upon to stop this heavy muscular labor and try to perform an operation as dainty as any required of a pianist or artist—he is compelled to attempt to draw the pattern accurately and steadily from the mould without causing the slightest flaw in the deli-

cate sand-surface, and without disturbing and breaking the thin walls and partitions of the sand by the slightest quiver of his muscles.

Obviously this method demands too much of any human muscles. The result is that after drawing a mould by hand there is immediate need for painstaking "slicking" and "patching" to repair defects in the mould-surface and delicate partitions. This is, however, not a remedy.

In the first place "free-hand" repairs obviously cannot be accurate. Secondly the slicked and patched spots in the sand are hardened more densely than other parts of the mould. The gases generated in pouring, instead of escaping freely and evenly at all points, are checked at these dense points, forming pockets of gas and treacherous "blow-holes" in the cast metal. When the casting is machined three conditions show up: (1) the pad of finish metal is uneven, demanding extra cuts in many places and thus slowing down production; (2) the uneven texture of the metal is unnecessarily destructive of cutting-tools; (3) blow-holes or lack of alignment compel the scrapping of many castings, even after the

expenditure of much expensive machine work.

Up-to-date foundry practice cuts right at the root of these troubles—it eliminates the uncontrollable variation in every muscular act by substituting machine-power at each step. Moulding machines replace human muscles.

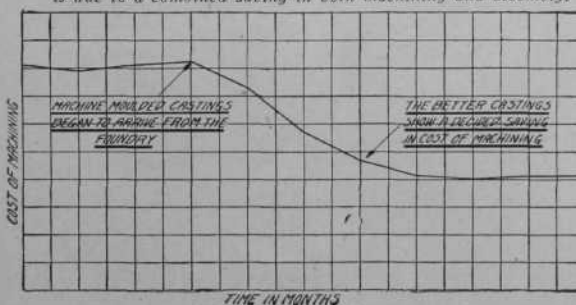
Machine-power rams the sand vigorously but evenly around and over the pattern. It jolts the sand to exactly correct density. It lifts and rolls the flask over smoothly. It draws the pattern without a quiver in true and vertical lift. The mould remains perfect with no need for slicking and patching.

This operation a machine repeats hour after hour through the day without variation. The moulds produced by machine during the fag-end of the shift do not deteriorate nor vary. The castings which come to the machine-shop from a careful machine-foundry are accurate to within $\frac{1}{16}$ ". This uniformity in size allows the casting to be jigged quickly—a very important and profitable feature. A small casting can be dropped into its jig and it will fit without any adjustment of the jig. A large casting will allow a jig to be placed on it—and again no adjustment of the jig is necessary. The expensive jig thus spends its entire time in useful machining rather than in wasteful adjustments. The uniformly-sized casting not only permits rapid jigging but also rapid machine work—both in the number of cuts to be taken on each surface and in the uniformity of cut. The temper-trying and costly discovery of a distorted casting—after a part of the machine work is done—is also eliminated.

These results are not limited to machining on any particular type of castings but are common to light, intermediate and heavy work.

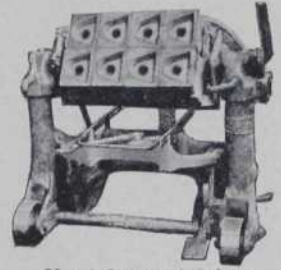
The saving in machining costs, due solely to the elimination of human muscle in the previous casting operations, averages 17%, a figure reached by combining reports from machine shops operating on widely different types of work. The percentage of defective castings is reduced, on the average, 71%.

Fig. 2—The graph below shows a typical result of a change from hand-made to machine-moulded castings. The decrease in costs is due to a combined saving in both machining and assembly.



Better Castings— and More Per Day

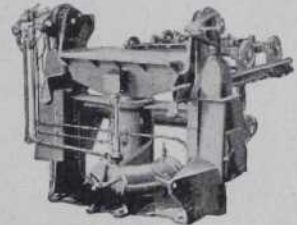
The machine-operated foundry not only builds up a list of more solidly-satisfied customers



Hand-Operated Osborn Moulding Machine

but at the same time profits from internal advantages.

Machine-production of castings increases output without increasing man-power, maintaining steady deliveries, and



An Osborn Roll-Over Model

reduces overhead by reducing waste metal, pattern repairs, and grinding and chipping time.

The catalog illustrated above, gladly mailed on requests written on company letterhead, illustrates not only a complete line of hand and power-operated machines but in photographs shows these machines in use in a long list of prominent foundries.

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National Bank of Commerce
in New York

Capital, Surplus and Undivided Profits
Over Fifty-five Million Dollars



extract from a recent article in *Konfektionär*, of Berlin:

The position now taken by our textile industry in relation to the United States is perhaps best illustrated by the fact that at the beginning of this year one of the best known American glove importers came over to Saxony and placed with the glove industry of that district large orders, the fulfillment of which alone will guarantee a year's work. German artificial silk manufactures also find a wide and strong market in the United States, as is evident from a number of extensive orders given to leading concerns. The encouraging momentum in these large orders lies in the fact that American commercial circles placed their orders in spite of their knowledge of the serious situation of the German textile industries almost without exception, even allowing long terms for delivery, and notwithstanding the splendid development and increased output capacities of the American textile industry itself. They have thereby emphasized their desire to re-establish the old and agreeable relations with Germany, the good customer and supplier of former times.

In the dye trade, so closely linked with the textile industry, the fear of German competition is always present. The war made us potentially independent of the Prussian dye maker and there is a strong movement to keep us so. As *Oil, Paint and Drug Reporter* puts it:

Germany has by no means been eliminated as a factor in the markets of the world. As long as foreign countries are willing to pay the prices demanded by German makers for the products of her industries, so long will Germany continue to cry "shortage!" and exact enormous tribute. Let us not be fooled by these cries. Patronize the home industries. The American dye and chemical industries must be made independent. Germany must be brought to a full realization of what she so well suspects. The United States has burst for all time the chains that held her a close slave to German-made dyes and chemicals. The links should be destroyed beyond all possibility of welding.

If Our Railroads Seem Bad Try Traveling in Rumania

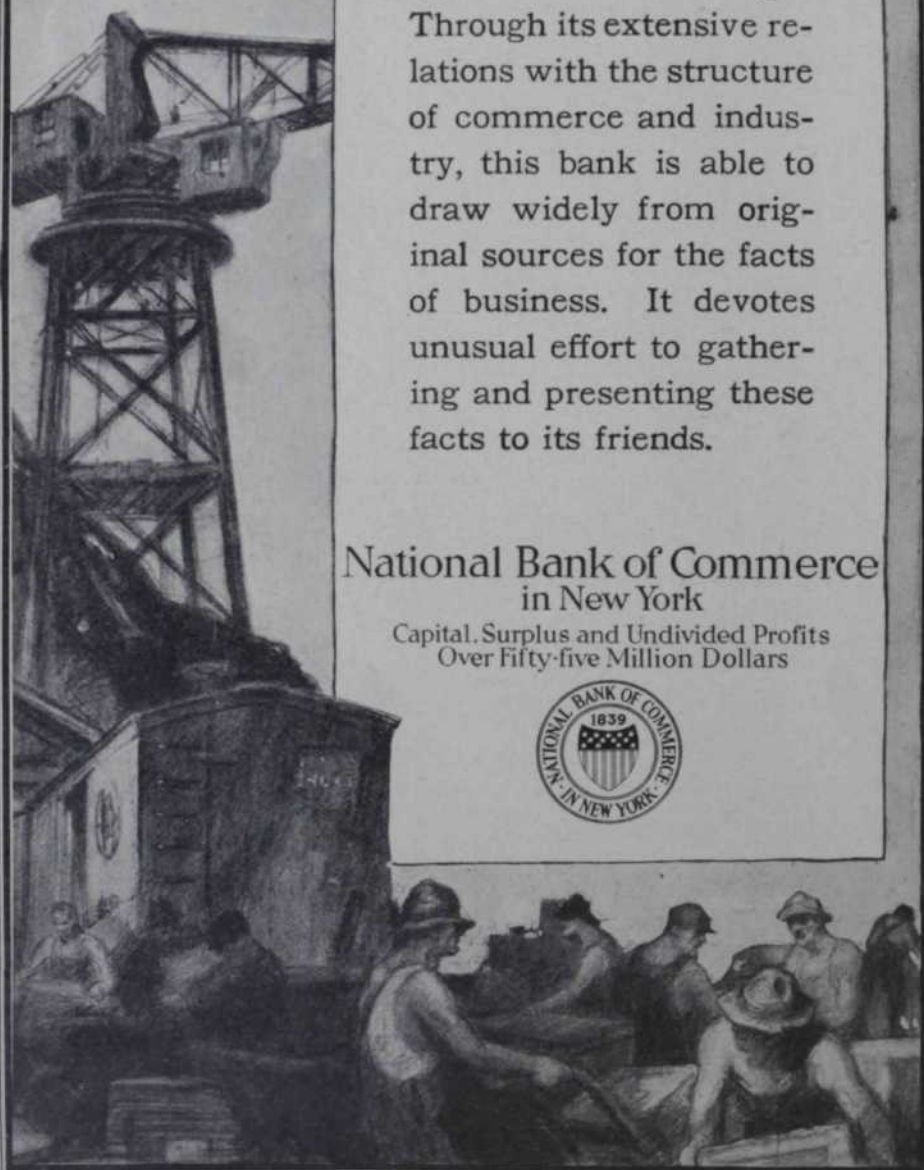
CRITICISM of railroad service is so common that it falls on deaf ears. It is refreshing to read what it is like in Europe. Here is the experience of S. M. Vauclain, president of the Baldwin Locomotive Works quoted in *Railway Age*:

We hear all sorts of criticisms of the services rendered by the railroads in this country. God forbid that we ever have to undergo transportation difficulties such as I underwent on my way to Bucharest. The bumpers of the cars were crowded; in some inconceivable way men locked themselves to the long buffers with their legs so intertwined that it was impossible to drop on the track. Two men would sit that way, sometimes holding their wives on their laps. The cars were fitted with ladders, and there were resting places for people, and the roofs actually afforded seating capacity. After leaving Czernowitz, there were twenty-five people, men, women, and children, on the roof of my car, leaving in the dead of night. They had their belongings with them. I counted seven pigs and many chickens, all carried under the owners' arms, while waiting for the train to move.

Recent Books on Business

THE ELEMENTS OF MARKETING. By Paul T. Cherington. [The Macmillan Company.]

Prof. Cherington has produced an advanced textbook on the distribution of merchandise. Very illuminating to the general reader is the chapter on "The elimination of distributors" with its story of the growth of the United Drug Company. It is easier to cry "cut out the middleman" than to cut him out. As the author says: "Mere elimination of one type of functionary or another does not insure either better or cheaper distribu-



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Make it your
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tion." Equally suggestive is the treatment of "simplification of functions" as a means of lessening the cost of marketing.

GRAPHIC PRODUCTION CONTROL. By C. E. Knoepfel. [The Engineering Magazine Company.]

Mr. Knoepfel speaks with authority as an industrial engineer and this volume carries to the *nth* degree the systematic use of diagrams and charts in business organizations. And of all industries what do you think best personifies to the author graphic control? The traffic cop. As Mr. Knoepfel explains, he seeks to put into business the "Stop" and "Go" signs.

THE LITERATURE OF BUSINESS. By Alta Gwinn Saunders and Herbert Le Sourd Creek. [Harper & Brothers.]

From Ruskin to Rockefeller, from Hugo Münsterberg to Fred Kelly the authors have gathered fifty specimens of well-done writing on business subjects. The writers seek to prove, and do prove, that good writing on such matters is no different from good writing on all matters. It is primarily a book for students and its purpose is to teach better letter writing, but any man who picks it up will find a dozen things of interest in it.

PRINCIPLES OF LABOR LEGISLATION. By John R. Commons and John B. Andrews. [Harper & Brothers.]

A new and revised edition of a scholarly and comprehensive work covering a matter now much in the public mind. This edition includes legislation up to June 1, 1920.

WINGS OF WAR. By Theodore M. Knappen. [G. P. Putnam's Sons.]

A history of our achievements in aircraft development during the war. Of interest to readers of all sorts. The chapter on "Centralization of Manufacturing Responsibility" is an interesting study in management and standardization. The chapter on "Lynching the Aircrafters" is recommended to those cynics who specialize in finding fault with the government.

MAKING ADVERTISEMENTS AND MAKING THEM PAY. By Roy S. Durstine. [Charles Scribner's Sons.]

Common sense plus amusement. Mr. Durstine not only knows what he writes about but he knows how to write about it. And, blessed relief, he doesn't take himself or his subject too seriously. If you doubt that an advertising man can get that way, you are recommended to read the discussion of trick words of advertising in the chapter on "The Great Mystery—Merchandising." Suggestive is the chapter on "Where is Advertising Going," and even a lay reader wishes he had worked out in fuller detail his suggestion of a public advertising bureau. The selection of illustrative advertisements is almost as interesting as the text.

STATISTICS IN BUSINESS. By Horace Secrist. [McGraw-Hill Book Company.]

A manual for business executives of the need and method of preparation of statistics in the solution of business problems.

BUSINESS RESEARCH AND STATISTICS. By J. George Frederick. [D. Appleton & Co.]

A study of business prophecy based on past experience and of the need for gathering the statistics of such experience. The author makes plain the need for research departments on such subjects as marketing and distribution, as well as in the scientific side of manufacture.

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DURAND Steel Racks are the product of engineering forethought and skill.

The skill has gone into the strength and rigidity of their construction, and the accurate fitting of every part.

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The Best Way To Buy a Building

HAROLD K. FERGUSON

BUILDING contracts have been undergoing a rapid evolution in the past five years. Necessity compelled business to try various experiments, as it became more and more apparent that the time-honored "Lump Sum" method was unequal to all exigencies and broke down utterly in a period of war, industrial shortage and sky-rocketing prices.

In a rapidly advancing market the far-sighted contractor was compelled to figure with so wide a margin of safety that a "Lump Sum" bid more often than not represented to the prospective owner an amount beyond the range of good investment sense. Nevertheless such a figure, though excessive, was absolutely logical in that there was no reason for a contractor to accept a job which carried with it more than the normal gamble.

The first alternative suggested was the "Cost Plus" system, under which the contractor invoiced all material, labor and job-overhead to the purchaser and rendered a fixed and agreed percentage charge for his own services. This guaranteed the contractor his fair profit, for a while solving the situation.

An unforeseen factor upset it.

The human equation entered in. In spite of the sincerest efforts of contractors and their executives, their subordinates and labor, less broadly trained in business, saw only the fact that profits increased with costs. Since increased costs obviously increased the amount represented by the contractor's percentage, they assumed that it advanced their employer's interest if they exercised less care and less personal industry. They could not grasp the truth that, from the management's view-point, a thoroughly satisfied customer was a greater asset than an immediate profit and, hence, they could not be prevented from "laying down" on the job, giving a loose rein to expenses and in general permitting, rather than fighting against, wasteful practices.

This method, then, has quickly outlived its usefulness except in those few instances on small contracts or sub-contracts where it is impossible to quote accurate figures in advance because of the unusual nature or peculiar difficulties of the job.

A third and new factor has entered into the contract situation.

A period of falling prices is generally sensed in the business world.

Construction in some places is held up because of this possibility.

The prospective buyer is justifiably unwilling to assume an obligation which may, because of later developments, return a disproportionate profit to the contractor if prices should decline rapidly.

This organization is wholly in sympathy with this stand and instead of standing idly by, saying, "Well, there's the condition—there's nothing can be done about it," has formulated a new and progressive step in building contracts.

The virtue of the "Lump Sum" method was the protection against excessive cost which it gave the purchaser. The contractor gambled for his profit.

The virtue of the "Cost Plus" system was its assurance of a profit to the contractor. It left the purchaser unprotected.

The new Ferguson plan combines the best quality of each of these and, furthermore, makes it unnecessary for a business to postpone building expansion merely because prices may fall.

The new plan is the Ferguson "Limited-Cost and Fixed-Fee" contract, and operates wherever definite quantities can be established.

A building is designed, specified in detail, definite quantities established, and the whole estimated. This quotation goes to the prospective purchaser in two parts; (a) a maximum figure representing our

estimate of costs at present prices, above which we guarantee that the building-cost shall not go; (b) a fixed fee, quoted in a lump sum, which shall be our remuneration.

After such a contract is signed, all material, labor and job-overhead is billed to the purchaser at cost in itemized detail. If the sum of these actual expenditures shows that actual costs ran under the estimate, this saving is shared by the owner and The H. K. Ferguson Company, being pro-rated proportionately as the cost of the building to the fixed fee.

In other words, and briefly stated, the Ferguson "Limited-Cost and Fixed-Fee" is the first building contract which protects both owner and builder and enables both to share in better performance or more favorable price-conditions.

In practice this plan is highly successful. Inasmuch as the assured earnings are fixed, there is every incentive to speed the erection and deliver the completed structure in the shortest possible time, regardless of scheduled promises. Secondly, the share-in-the saving operates as an incentive to economy in addition to our normal anxiety to deliver the building at so pronounced a saving that no firm other than Ferguson will even be considered on future work.

Note, however, that this is not the only form of contract we offer.

Four forms are still available: (2) the "Lump Sum"; (b) the "Cost-Plus"; (c) "Engineering" (under this we study, design and specify the complete building for the standard fee, and then render our bid in competition with other contractors, waiving the fee if the contract is awarded us); and (d) "Limited-Cost and Fixed-Fee."

Ferguson Standard and Special Factory Buildings are permanent buildings made notable by specific engineering improvements which assure such desirable points as maximum daylighting, increased ventilation, improved and freeze-proof drainage, superior truss-strength.

A long list of the leading corporations of America occupy Ferguson structures, a number of which order Ferguson buildings *without competition*.

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Ferguson

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-The Best Building To Buy-

Ferguson Standard No. 1 Building is admirably adapted to use as a warehouse, or for light machine shop work. Amply lighted by wall sash. Construction allows future extension at any time. Can be erected quickly from material shipped from stock.

Ferguson Standard No. 2 is 90 ft. wide with monitor to provide adequate lighting and ventilation. Steel columns and roof beams; provision can be made for craneway. Best adapted to machine shop or light foundry uses.

Ferguson Standard No. 3 is adaptable to almost any industrial use where a maximum of ventilation, daylight and usable floor-space is required in a permanent building. Superior design includes "V"-type monitor. Only one column to every 2000 sq. ft. of floor-space. Any width in multiples of 50 ft. aisles.

Ferguson Standard No. 4, a sawtooth building, provides even daylight over entire floor area. Construction readily lends itself to extension in either direction. Trusses will hold 3-ton load at center. Provision for mono-rail cranes, if desired.

Ferguson Standard No. 5 is used for a foundry or building requiring an unusual amount of light and ventilation. The monitor sash and roof slope are designed to expel smoke and gas without interference from cross-drafts. The construction provides for easy installation of crane-ways.

Ferguson Standard No. 6 is of same construction as Standard No. 3 but 80 ft. wide. Can be used as second story over reinforced concrete building with 20 ft. spacing of columns in each direction.

Ferguson Standard No. 7 is constructed with center aisle roof supported by a pitched truss, which provides ample ventilation and lighting and accommodates a crane runway.

Ferguson Standard No. 8 is a multi-story factory building with girders of steel, joists of wood or steel and columns of steel. One-third of steel sash in side walls are ventilated at top.

The last drawing shows a typical Ferguson commercial building designed and constructed by Ferguson engineers.

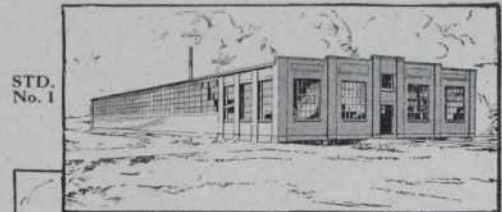
The get-it-done resourcefulness of Ferguson management erects buildings on schedule time in spite of every obstacle. "A good job done on time" has never been broken—a penalty has never been claimed. A building contract under Ferguson's Fixed-Fee Limited-Cost method assures you not only highest quality but lowest possible cost.

Wire, write or 'phone

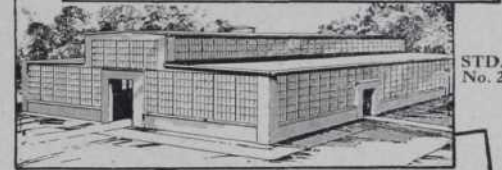
TYPICAL COMMERCIAL BUILDING



STD. No. 8



STD. No. 1



STD. No. 2



STD. No. 3



STD. No. 4



STD. No. 5



STD. No. 6



STD. No. 7

THE H. K. FERGUSON COMPANY

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Phone Rosedale 6854

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Phone Murray Hill 3073

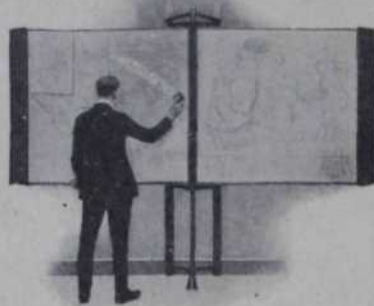
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The J. I. C's.

Spelled out, they are the "Joint Industrial Councils" of England; here are the results of an important experiment in domestic peacemaking

By GEORGE T. BYE

London Representative of "The Nation's Business"

THE cynic-opportunist says, "Fight fire with fire." It may be that the Whitley Council, heard of so frequently, is a practical means of fighting radicalism with radicalism, for there is no denying the near-syndicalist guild structure of a Whitley Council. Their steady spread in organized labor in Great Britain, and the success of their vigorous missionary appeal to unorganized employers and employees to form separate associations and qualify for marriage in Whitley Councils, show that as a palliative to extremism in labor circles they are having definitely favorable results.

It is true that today one does not read so much of Whitley Councils as in 1917, when the idea was launched and earnestly discussed everywhere along with other projected schemes for the reconciliation of capital and labor when their national truces should end with the war. It is no longer on the surface. It since has been percolating in the minds of the people of the country of its origin.

A considerable part of British industry is under a voluntary regime of Whitley Councils; and though they are beyond the tinkering stage, the remainder of organized industry is closely following the operations of the Joint Industrial Council idea to discover if rights and privileges are surrendered by the adoption of the council constitution.

At the end of July, 1920, sixty-three separate and distinct industries had been wedded in Joint Industrial Councils. These are national bodies superior to a greater number of District Councils, themselves above hundreds of works committees. They descend in order of importance analogously to a congress, a provincial legislature and a purely local assembly.

The first council marriage was performed in January, 1918. To date there have been but four divorces (in the baking—England only—furniture, elastic webbing and music trades industries, of 190,000 workers), no gross scandals, no rumors of alienation of affections by unmoral co-respondents, nothing more than a few healthy, snorty little tiffs that I am sure the world has grown to expect even of weddings of angels.

Toward the end of 1919 the scheme was beginning to be applied to the British Civil Service as well as to national dockyards, arsenals and other state industrial establishments. The government was not disposed to stand aloof and see private enterprise alone enjoy the benign unity of Whitley Councils. The War Cabinet approved the establishment of Whitley Councils in the Civil Service in June. The National Council for the Administrative and Legal Departments was formed in July. It took several weeks to sketch a comprehensive plan; then the Admiralty and Office of Public Works invited duly elected staff representatives to sit with equal bodies of department heads. The War Office and the Ministry of Munitions followed. More than 75 state councils (clerical and industrial) are now in operation, including the Post Office, War Office, Home Office, the Treasury, in fact nearly all governmental civil activities.

People over here speak of them sometimes as "J. I. C's"—Joint Industrial Coun-

cils. The idea has tenaciously become a part of British life. The original name of "Whitley Council" came from the chairman, J. H. Whitley, of a "Reconstruction Committee on Relations between Employers and Employed" appointed by Mr. Asquith when Prime Minister, but which reported to Mr. Lloyd George as Premier on March 8, 1917. Mr. Whitley, then and now chairman of committees and deputy speaker of the House of Commons, is the senior partner of S. Whitley & Co., cotton spinners, Halifax, England.

The committee was asked to advise the government on two points: (1) To make and consider suggestions for securing a permanent improvement in the relations between employers and workmen. (2) To recommend means for insuring that industrial conditions affecting the relations between employers and workmen should be systematically reviewed by those concerned, with a view to improving conditions in the future.

The Whitley plan, though far past the experimental stage, is not yet without its weaknesses. But these are not organic defects. It must be considered, too, that the Whitley idea looks toward a culmination that is almost on the threshold of the millennium. In addition to the organization of every industry into a benevolent efficient society, it anticipates the creation of a National Industrial Congress, with members elected by every one of the Joint Industrial Councils, which will be the supreme body in the productive industries of the nation. It will, of course, not be set up until every industry has qualified with a Whitley marriage. Before that time, if the program is fully carried out, Parliament will have granted statutory powers to each Joint Industrial Council whereby it may legislate compulsorily on all questions affecting wages, hours, conditions of employment and even selling prices, subject only to the veto of the government temporarily in the role of the supreme congress, or National Central Council. This will make certain that no one industry rises to unreasonable power or profit.

Hard Looks from the Unions

SOME say the government is the Joint Industrial Council's worst enemy, for it continues to be affrighted by the hard looks given it by the larger unions. You cannot blame them for hesitating before agreeing to enter council-matrimony so long as they can get coercive settlements from cabinet ministers.

Excluding the governmental councils and those too recently formed to be seasoned, the National Joint Standing Industrial Councils holding regular meetings, with an employer chairman and an employee vice-chairman, employer secretary and employee secretary, and two consultative officials called "liaison officers," one representing the Ministry of Labor and the other the Board of Education, are in the following trades:

Pottery, Building Trades, Rubber Manufacturing, Gold, Silver, Horological and Allied Trades, Match Manufacturing, Silk, Chemicals, Bread Making and Flour Confectionery, Paint, Color and Varnish, Vehicle Building, China Clay, Hosiery, Metallic Bedsteads, Bobbin and Shuttles, Made-up Leather Goods, Woolen and Worsted (Scot-

fish), Hosiery (Scottish), Saw-milling, Wall Paper Making, Wool (and Allied) Textile, Tin Mining, Electrical Contracting, Packing Case Making, Cord, Braid and Smallwares Fabric, Welsh Plate and Sheet, Road Transport, Asbestos Manufacturing, Coir Mat and Matting, Waterworks Undertakings, Local Authorities' Non-Trading Services (Manual Workers), Gas Undertakings, Electricity Supply, Heating and Domestic Engineering, Spelter, Flour Milling, Boot and Shoe Manufacturing, Iron and Steel Wire Manufacture, Printing and Allied Trades, Needles, Fish Hooks and Fishing Tackle, Carpets, Wrought Hollow Ware, Electrical Cablemaking, Tramways, Quarrying, Cement, Glass, Soap and Candles, Cooperage, and—a triumph—the Local Authorities Staffs, which means all municipal employees in the British Isles.

The total number of workers represented in the J. I. C. organization is more than 3,300,000.

I have said that all of these Joint Standing Industrial Councils have a chairman and vice-chairman, respectively an employer and employee. This is not quite exact. Some councils choose to agree that chairmen and secretaries shall alternately enjoy precedence. There is the utmost flexibility about the formation of the councils. Nothing is compulsory, not even their decisions, which is a weakness to be referred to later.

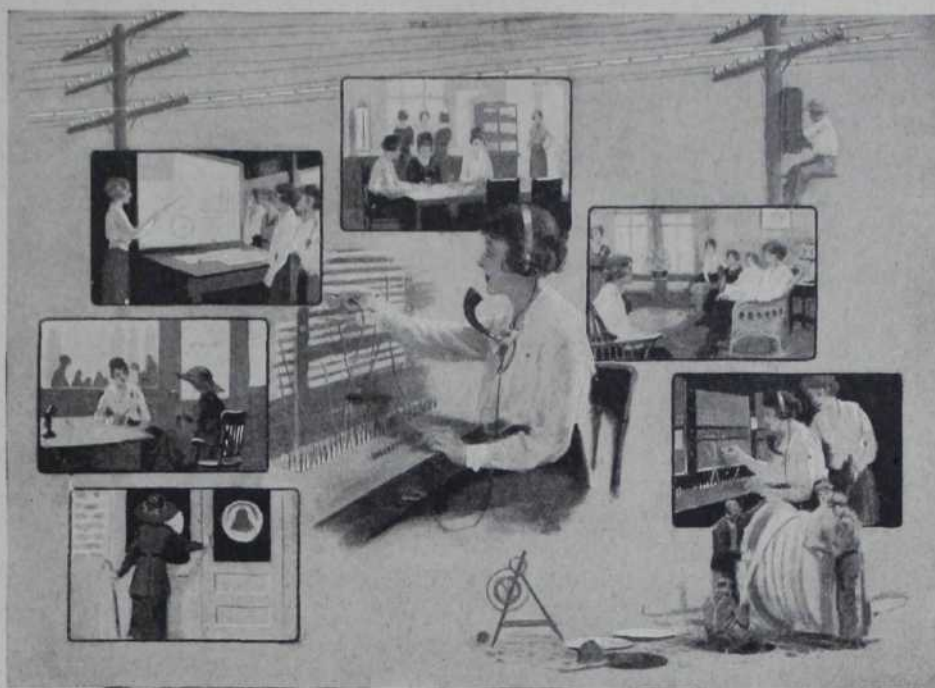
What They Are Doing

WE WILL consider what the Whitley Councils have undertaken and are undertaking. These exercised functions have been concisely set out in a government report as follows:

1. To secure the largest possible measure of joint action between employers and work people for the development of the industry as a part of national life and for the improvement of the conditions of all engaged in that industry.
2. Regular consideration of wages, hours and working conditions in the industry as a whole.
3. The consideration of measures for regularizing production and employment.
4. The consideration of existing machinery for the settlement of differences between different parties and sections in the industry, and the establishment of machinery for this purpose where it does not already exist, with the object of securing the speedy settlement of difficulties.
5. The consideration of measures for securing the inclusion of all employers and work-people in their respective associations.
6. The collection of statistics and informations on matters appertaining to the industry.
7. The encouragement of the study of processes and design and of research, with a view to perfecting the products of the industry.
8. The provision of facilities for the full consideration and utilization of inventions and any improvement in machinery or method, and for the adequate safeguarding of the rights of the designers of such improvements, and to secure that such improvement in method or invention shall give to each party an equitable share of the benefits, financial or otherwise, arising therefrom.
9. Inquiries into special problems of the industry, including the comparative study of the organization and methods in this and other countries, and, where desirable, the publication of reports. The arrangement of lectures and the holding of conferences on subjects of general interest to the industry.
10. The improvement of the health conditions obtaining in the industry, and the provision of special treatment where necessary for workers in the industry.
11. The supervision of entry into, and training for, the industry, and cooperation with the educational authorities in arranging education in all its branches for the industry.
12. The issue to the press of authoritative statements upon matters affecting the industry and of general interest to the community.
13. Representation of the needs and opinions of the industry to the government, government departments and other authorities.
14. The consideration of any matters that may be referred to it by the government or any government departments.
15. The consideration of the proposals for District Councils and Works Committees put forward in the Whitley Report, having regard in each case to any such organizations as may already be in existence.
16. Cooperation with the Joint Industrial Councils for other industries to deal with problems of common interest.

All but six councils have acted as arbitration tribunals for the settlement of disputes as to wages, bonuses, allowances, holidays, hours and general working conditions. The study of profits is a detail of all these proceedings, data being submitted both by the accountants of the management and the research committees of the workers. In certain instances where joint conferences had been in existence for some time—as in the cable-makers' industry, for instance—these have been incorporated as council committees.

In a few cases the council agreements upon questions of wages, hours, and holidays have to be submitted to a referendum of the trade unions. This is where the twin sisters of



Training For Service

What science and engineering have done to develop the mechanical efficiency of the telephone, specialized training has done in the development of workers.

Plant engineers, linemen, directory clerks, toll operators, equipment installers, electrolysis engineers, trouble hunters, line repairmen, test table operators, chief operators, contract agents, building engineers, line installers, exchange repairmen, plant inspectors, trouble operators, fundamental plan engineers, draftsmen, estimate clerks, exchange operators, cable testmen, equipment inspec-

tors, wire chiefs, traffic engineers, galvanometer men, cable splicers, facilities engineers, surveyors, information operators, switchboard installers, accountants, testmen, supervisors, station repairmen, equipment engineers, directory operators, statisticians, appraisal engineers, routing operators and scores of other skilled employees are specially trained for the exacting work of providing telephone service.

Throughout all work of telephone construction and operation there is a ceaseless endeavor at mastery of service that makes for improvements beneficial to the public.



AMERICAN TELEPHONE AND TELEGRAPH COMPANY
AND ASSOCIATED COMPANIES

One Policy

One System

Universal Service

And all directed toward Better Service

The margin of profit in many industries largely depends upon the efficiency, dependability, and low upkeep cost of machinery used



G-E Vertical Pump Motors give powerful, efficient service in this water pumping station.



Vertical Motor direct drive for centrifugal or pumps



Dependable operation of motor driven pump under severe conditions in mining



Protect your industry with motor driven fire pumps



Widespread developments in irrigation through use of motor driven pumps.



Motor driving battery supply pump in sugar mill.



Motors direct connected to centrifugal pump 6000 gallons of water per minute.

Electrically driven pumps raise the margin

PUMPING costs receive careful scrutiny in the economical management of many industrial properties. Consideration of the most satisfactory solution of the varied problems involved leads to electric drive in which G-E Motors and attending equipment are specified.

Pumping stations, mills, mines, textile factories, chemical plants, irrigation developments—all have presented diversified requirements in adopting electric pump drive.

The capacity of the pump manufacturer to produce particularized installations has been instituted by the specialized efforts of G-E engineers, co-operating with him.

Securing this equipment and co-operative service of the General Electric Company through your manufacturer is to combine the greatest efficiency and dependability in the application of electric power to your pumps.

General Electric

General Office
Schenectady, N.Y. **Company** Sales Offices in
all large cities

chaos, Suspicion and Jealousy, get in their good looks; and a disruption of the Joint Industrial Council of the baking industry finally resulted from an adverse vote by union members on a council agreement. Again, in the furniture industry the workers failed to ratify the council committee's draft of terms of settlement and the dispute passed out of the hands of the council; however, the employers have made substantial increases of wages as a result of local agreements, conditional on the acceptance by their workpeople of the agreement embodied in the council's report, so that that body may ultimately be resuscitated.

Traveling Arbitrators

ODDLY enough the English chairman and vice-chairman of the Joint Industrial Council for the printing industry was able to end prolonged disputes in Ireland. The Heavy Chemicals and Road Transport Councils have set up traveling arbitration panels; the Wool (and Allied) Textile Council has established an arbitration panel. The Furniture Council has formed a national conciliation board. The Music Trades Council has set up a conciliation committee.

In the matter of the employment of disabled men, the Hosiery, Music Trades, Silk, Wool (and Allied) Textile Councils have agreed to absorb crippled ex-soldiers in a number up to 5 per cent of the total of their employers. Four other councils are investigating the question.

The Boot and Shoe "soviet" recommended "that women should no longer be employed in men's occupations in this trade." The subject of apprenticeship and the employment of women and juveniles has been taken up by the Hosiery, Pottery, Vehicle Building, and the scientific management committee of the Building Trades Councils since July, 1919. In each case the council has cooperated with the Juvenile Employment Department of the Ministry of Labor. Before the date mentioned, schemes for dealing with pre-war apprenticeship had been approved by the Joint Industrial Councils for the music trades, pottery, saw-milling and wool (and allied) textiles industries.

Improving Industry

THE Match-Making Council, in collaboration with the Foreign Office and the Department of Overseas Trade, has been studying the foreign match industry. It has requested the Foreign Office to approach the Swedish and Japanese governments to obtain their signatures to the Berne convention regarding the use of poisonous phosphorus. The pottery industry has long been in the dark on the question of wages earned by piece-workers, many of whom employ and pay their own assistants. To collect this information, record cards were issued to 35,000 journeymen piece-workers by the J. I. C. at the beginning of November. These are now being collected.

The Admiralty J. I. C. has worked through last winter to provide a satisfactory short-time employment scheme for the dockyards to keep the workers' distress at a minimum during the transition from a war to a peace footing. Four union members of the Admiralty J. I. C. sat upon a Prime Minister's Select Committee to inquire into the use of government dockyards for commercial purposes.

The Whitley ideal is the reconstitution of industry so that managers and workers will strive willingly together to build their trades into a massive, compact, commercial foundation for a new national temple of social justice.

HARTFORD, CONN. MAR 12 1918 191 No. 4498A CASH

THE CITY BANK & TRUST CO. 51-50

PAY TO THE ORDER OF *Beau* \$44.98

FORTY FOUR DOLLARS NINETY EIGHT CENTS DOLLARS

SAGE-ALLEN & COMPANY, INC.

Edw. B. May SECRETARY

SAGE-ALLEN & COMPANY INCORPORATED

It "Stumped" the World's Master Forger

This genuine check for \$44.98, issued by a department store rated "AA1" was potentially worth thousands.

It was mailed to a Brooklyn wallpaper firm whose mail box was looted by confederates of a celebrated forger, head of a gang active for 15 years, and well known to the police, but who has eluded conviction.

The "master-mind" of forgery raised many of these stolen checks that had been mailed by merchants in various States, to thousands of dollars. Then he tackled this one, applied acid, and changed the Brooklyn firm's name to "Bearer," so skillfully that no trace whatever of the original name and date remained. But he stopped at the two-color "shredded" Protectograph amount line, and realized only the paltry \$44.98.

EXACTLY FIFTY ONE DOLLARS SIX CENTS

This is the famous two-color "shredded" line of the Protectograph Check Writer. Had the check been written on a Protod Forger-Proof Check, the forger couldn't have changed even the name.

An "Ex" master-forger, that the police *did* catch, who is now in State Prison, has exposed some secrets of the trade in a little book called "Scratcher Sends a Warning." We will send it free to responsible executives only. Enclose letterhead or card showing business connection.

TODD PROTECTOGRAPH CO.

TRADE MARK REGISTERED
Established 1899

1174 University Ave.

Rochester, N. Y.

World's largest makers of check-protecting devices and forgery-proof checks

Protectograph Anti-Forgery System

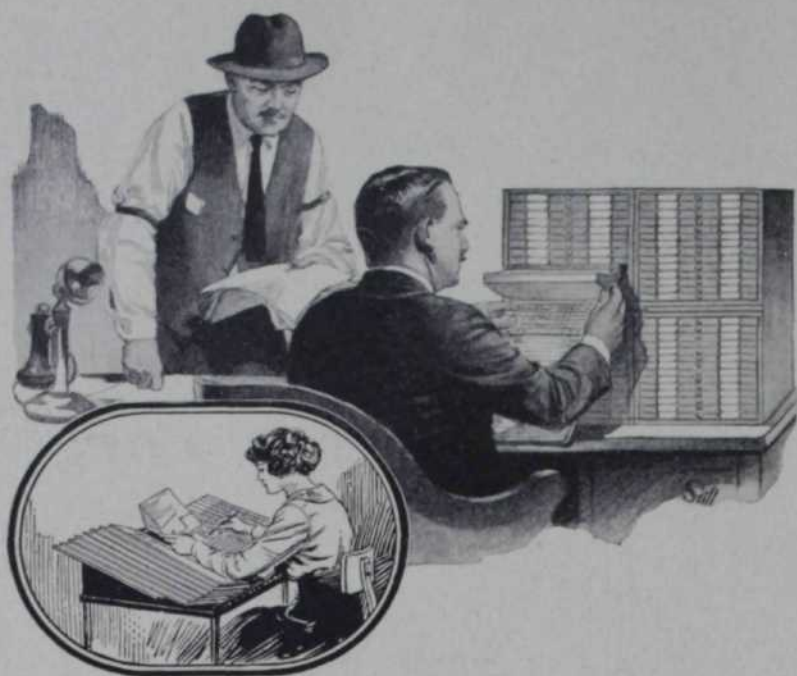
Todd Protectograph Co., University Ave., Rochester, N. Y.

Send me the Scratcher Book—and details of the Protectograph Anti-Forgery System.

NAME _____

Enclose business card or letterhead

W B-1130



**"No, we're fully stocked on these—
but we need a lot of ..."**

**—Stock conditions are signalled
instantly by Rand Visible Records**

MONEY needlessly tied up, machines and men idle while overhead goes on—what business man does not know the losses from overstock or from shortage of materials!

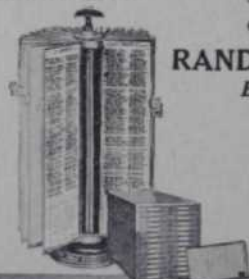
But today, through the introduction of Rand VISIBLE Card Equipment, such losses are practically impossible. With your stock records Rand-displayed, deliveries of the right materials in the right amounts at the right time, are possible. Maximum and minimum signals prevent overstocking or material shortages. Thus capital "tied up" in overstocking or waiting for essential parts is held to a minimum.

Nothing mysterious or complicated about it—Rand Traco Cabinets or Rand Desk Stands (here shown) simply contain your records in such a form that they are always before your eye. You can get at the status of every item of stock instantly. And since the cards need not be removed, they cannot be misplaced or overlooked.

Complete, immediate knowledge of stock through Rand Visible Records enables the Sales Manager to turn it over with greater frequency, permits the Purchasing Agent to perform his duties without guesswork, gives to the Stores Department an ideal efficiency.

And just as in Stock and Purchase control, Rand Visible Records speed up and make more efficient the Control of Sales, Production, Personnel, Credit, etc., cutting overhead at the same time.

Visualize your Card
Records on the Rand



Ask our local office to show you—without obligation
—how Rand can solve your particular problem.
Or write direct for our Stock Control Booklet Address Dept. B-6

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Branches and Sales Offices in all Leading Cities

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VISIBLE BUSINESS-CONTROL

VISIBLE CONTROL OF CREDITS · PRODUCTION · PERSONNEL · STOCK · SALES · PROMOTION ·

British Business Visits Us

ON BIDDING farewell to his American hosts, Stanley Machin, president of the London Chamber of Commerce, who, with fifteen other representatives of English Chambers of Commerce, was the guest of the Chamber of Commerce of the United States at Washington on October sixth and seventh, said: "American and British business men should get together more frequently to discuss their problems and swap opinions on matters affecting trade as such conferences help to remove misunderstandings and prejudices. We get to know each other better. Personal meeting will do more than anything else to improve British-American trade relations and to cement the bonds of friendship between the two countries."

This expression by Mr. Machin seemed to sum up the feelings of the Englishmen and their hosts. A spirit of "hands-across-the-sea" permeated the different meetings, both sides taking the view that friendly commercial relations between the two great English-speaking countries was absolutely necessary to the welfare and prosperity of both nations. "We are each other's best customer," was the way one of the British business men put it, "and surely no business man would be so unwise as not to cultivate and build up the good will of his biggest buyer."

During their two days' stay in the national capital, the British delegation met with the Directors of the National Chamber and discussed their trade problems. Probably the most interesting conference was that held in the old Daniel Webster home, recently purchased by the National Chamber, when the subject of "Adjustment of Labor Disputes" was talked about. In speaking of the British labor problems, A. J. Hobson, president of the Association of British Chambers of Commerce, said:

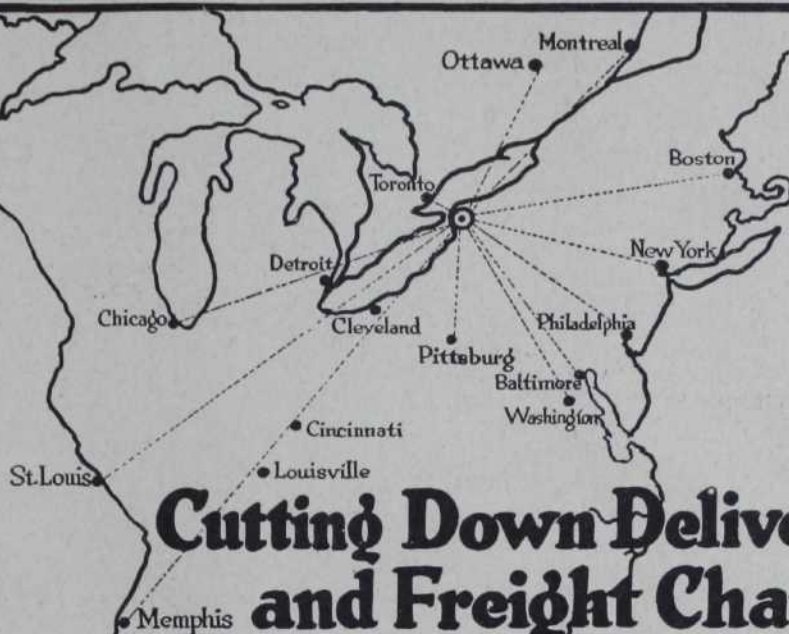
"The view of the government officials in England is that every man ought to be in a union and every employer in an association. The man who is not in an association or a union is a nuisance to a government department. They like to see us arranged in regular regiments because, as they say, it is so much more convenient for a government department to deal with us as one party than with employer as an individual. The result is we are ceasing to be a free country, because the man who is not in the union is regarded, even by the government of his country, as a man who is making an unreasonable use of his liberty in not joining the army he is supposed to be in and not being at the battle he is supposed to be at."

He asserted that the efforts of the British government to settle labor disputes have not been satisfactory. To prove his contention he cited an instance in his own business. "In December last year," he said, "my men had secured an extraordinary advance and were receiving more than 250 per cent above the previous wages although the cost of living is supposed to have advanced only 150 per cent. They applied for a further advance on Christmas. It was referred to the government tribunal handling disputes and we did not get a decision until April. I had to go on delivering my goods without knowing the cost, and in April my wages were put up 12½ per cent and that advance was dated back to Christmas. And I had been delivering goods for four months on an unknown rate of wages."

"In our business we have our men engaged on a monthly notice. I would recommend it as a valuable custom because the men know there can be no alteration of wages, either up or down, without a month's notice,

THE TONAWANDAS

New York 10 hrs.
 Boston 13 hrs.
 Chicago 12 hrs.
 Detroit 5 hrs.
 Pittsburg 6 hrs.
 Cleveland 4 hrs.
 Philadelphia 11 hrs.
 Toronto 3 hrs.
 Montreal 5 hrs.
 Washington 11 hrs.
 St. Louis 15 hrs.
 Cincinnati 11 hrs.
 Indianapolis 12 hrs.
 Memphis 24 hrs.
 Louisville 15 hrs.
 Nashville 21 hrs.
 Baltimore 11 hrs.



Cutting Down Deliveries and Freight Charges

November 1, 1920

Dear Sir:—

When comparing your proposals with those of competitors careful buyers will figure on transportation costs and time required for delivery.

These determining items can be greatly in your favor—if your plant is located at the Tonawandas—as can be seen from the list at the upper left hand corner of this page.

These advantages also apply to your raw materials. Your raw materials can be cheaply laid down at the Tonawandas due to their nearness to cheap water transportation, and to railroad trunk line service on the N. Y. Central Lines, Erie, Lehigh Valley, Grand Trunk. The Lackawanna and Pennsylvania have secured right of way and authorization to enter the Tonawandas.

Then, too, all the other basic conditions are right for assuring maximum returns on your invested capital.

Let us send you the complete facts.

Very truly yours,

CHAMBER OF COMMERCE OF THE TONAWANDAS

TONAWANDA, N. Y. - - NORTH TONAWANDA, N. Y.

In the Heart of America The Tonawandas

1. The Chief Marine and Rail Gateway between the Great Lakes and the Atlantic, and between the United States and Canada.
2. Reliable, and cheap electric power from Niagara.
3. Superior labor supply, with open shop the rule.
4. Within 12 hours' ride of 70% of United States' and 80% of Canada's population.
5. Basic raw materials and diversified manufacturing within or close to the community.
6. Progressive living and working conditions; center of rich agricultural and fruit belt; equable climate.
7. The billions of financial resources of the Buffalo-Niagara Frontier District.



Send
For
This
Booklet

Cut out this corner as a reminder to write for Free Illustrated Booklet on the Tonawandas. Please use your letterhead.

ELECTRIC SHOCK IS FATAL TO GROOVER

Everett Groover, age 22, was almost instantly killed by an electric shock at 5 o'clock last evening while working on elevator at the Hane livery barn, 815 Jackson street. Coroner Earl Seils is conducting an investigation of the death.

The body was taken to Alexandria for burial.

Groover was in the act of throwing a switch which operated an electric elevator in the barn when his hand touched the metal portion of the switch instead of the wood handle. The shock rendered him unconscious and Darus Leighton, a boy, nearby ran to his aid. Leighton pulled Groover's hand loose from the switch. The young man was dead before further aid arrived. He was taken to Clayte Sells morgue in an ambulance.

Mr. Groover had been working here only about a month. He is survived



The silent voice—calling men to death

*One moment a pulsing, living being—
the next a crumpled lifeless shell*

CARELESSLY, he reached for the wooden switch handle—and missed. His hand, slipping, touched the live metal blade. A blinding flare shot out—and through his body darted the powerful electrical current.

No chance to live—no time to say farewell! Friends, doctors—none could stop that lightning rush of death.

All over the land protest is going up

From everywhere an outcry, in ever-increasing intensity, is heard against the needless waste of life and property caused by the exposed knife switch.

Fire marshals are ruling against it; safety officials are branding it as dangerous; labor unions are denouncing it; electrical societies are condemning it; architects and contractors are blacklisting it; from every side comes the demand from authorities—the exposed knife switch must go.

State Fire Marshal H. H. Friedley of Indiana in ruling against the exposed knife switch, describes it as "one of the most prolific causes of loss of life and property." John S. Horan, State Fire Marshal of West Virginia, has called it "one of the most dangerous fire and accident hazards in existence."

A total of \$1,183,674 was lost in Michigan during the year 1919 by fires due to defective installation of wires and carelessness in attending," says Fire Marshal Frank H. Ellsworth of Michigan. Fire Marshal L. T. Hussey of Kansas has joined these progressive states with

a similar ruling "to protect the lives and property of the State of Kansas."

The Square D Safety Switch

The Square D Safety Switch is an absolute safeguard against shock, fire, and industrial accident of any kind.

It is a simple knife switch in a pressed-steel housing—externally operated. A handle on the outside does all the work.

Current cannot reach that handle, nor the box itself—tough, rugged insulation completely isolates all live parts. They are safely enclosed within steel walls.

The switch may be locked in the open position, too, while work is being done on the line; nobody can thoughtlessly turn on the current. This feature is saving many an electrician's life. "On" and "Off" positions are clearly indicated. The Square D Safety Switch is made in over 300 sizes, types and capacities—for factories, office buildings and homes.



The dangerous exposed knife switch



The Square D Safety Switch

The greatest remaining hazard around an electrical installation—the exposed knife switch—is going.

All over the country progressive firms—leaders both in employees' welfare and in efficient production—are safeguarding the lives of their workmen and their property by replacing all old-style exposed knife switches with Square D Safety Switches. Prominent among them are:

Nordyke & Marmon Company
Carborundum Company of America
Allis-Chalmers Company
Sinclair Refining Company
Texas Company
Rock Island Lines
Sperry Flour Company
Eastman Kodak Company
Bethlehem Shipbuilding Corporation
Union Switch & Signal Company
Standard Steel Car Company
Aluminum Ore Company

Listed as standard for both fire and accident prevention by the Underwriters' Laboratories of the National Board of Fire Underwriters. Meets the requirements of the National Electrical Safety Code of the Bureau of Standards, Department of Commerce, Washington, D. C.

Installed by your electrical contractor-dealer

Architects and engineers are listing it as standard equipment. Ask any of them for further information—or write us direct.

Act NOW and protect your workmen, your family and your property against fire, shocks and other electrical hazards.

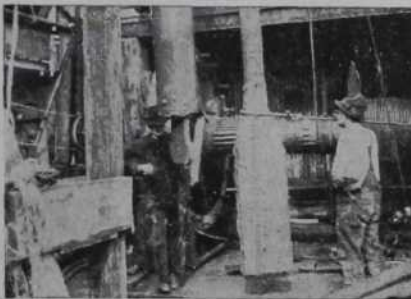
SQUARE D COMPANY

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ALL OVER the WORLD

the quest for Petroleum
goes on constantly and
"Oilwell" Machinery is
conducting this search.

Test Well for Oil in England



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When the British Government decided to make an official test for Petroleum in England, "Oilwell" Experience was called upon to furnish the drilling equipment.

We are Specialists in
**Oil and Gas Well
Supplies**

and our experience in manufacturing supplies for the oil country dates back to the drilling of the First Oil Well in America in 1859.

If it is or
the
oil country
we
make it



Any Size
Any Depth
Anywhere

Oil Well Supply Co.

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and as the date approaches when the men are either going to be locked out or are going to go on strike both sides have had time to cool and get reasonable.

"One of the results of the dating back of the advanced wages by the government is that it has entirely broken up the custom of a month's notice, as the men will no longer recognize that they are under this obligation."

"I think it is most deplorable that there is this insistence that every man must join the union. Many unions have restrictive clauses, such as that only sons of those in the trade shall come in the union, and clauses directed towards an effort to form a monopoly in that trade, and if the scarcity of labor goes on long enough there is no doubt we should be depleted of skilled men because of the apprenticeship rules under which that union is governed. That is one of the difficulties we shall have to face in England in the future."

Mr. Machin, who was for a number of years chairman of the London Conciliation Board, also told the American business men some interesting facts about the labor situation in England. He said that "it should be clearly understood that in England there are two classes of agitators. There are those who are agitating the unions in their sincere and earnest wish to improve the condition of the working men and to increase their earning power. Although we may not always see eye to eye as employers with their demands, I think that is a movement with which we must all have sympathy."

Extremists at Work

BUT there is also a body—nothing like such a large body, but a very active body—of extremists who are using the labor movement simply with the object of overthrowing the Constitution. That body for the time being, has captured certain reins of their own union government, and they are making a great deal of fuss, but I am convinced that in the end—and I hope in the near future—they will be overthrown by the real sober-minded trade unions. Those men we can have absolutely no truck with at all. They will have to be fought and the government will have to deal with them in an unmitigable way."

Speaking of what has been done by the London Conciliation Board, Mr. Machin said that during its twenty years of existence only one award had been departed from up to the time of the war. In all cases which came before the board, he said, a court was appointed to consider the questions involved. The court consisted of trade-unionists and employers outside of the industry involved in the case at issue. During the war, however, he stated that the court lost some of its usefulness as the workers, instead of submitting their controversies to the court, appealed to the government. Settlements effected by the government have not always been satisfactory to business, he said.

Some of the high lights of the labor situation in the United States were pointed out by Frederick J. Koster, of San Francisco. Mr. Koster said that if the efforts of certain elements in this country to arouse class feeling are successful, then any attempt to bring the people together will be futile.

One of the most interesting contributions to the discussion was that of H. L. Symonds, of London. He said that in his plant he had an arrangement with his men whereby their wages were on a sliding scale. The agreement provides that if the cost of living increases wages are to be advanced propor-

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Rush Work!

Speed up your business. Put your ideas to work. This machine prints sharp, clear, personal letters in your own office, without type-setting, without delay, without trouble,—almost without cost.

ROTSPEED STENCIL DUPLICATOR.

prints anything that can be type-written, hand-written, drawn or ruled. It is easy to operate. Just write the form—attach the stencil—turn the handle. Twenty to a thousand striking, stimulating clear, exact copies ready for the mails in 20 minutes.

PAYS FOR ITSELF IN 10 DAYS

That's the experience of many users. It saves time—reduces printing bills—helps to increase sales and collect money. Used by banks, manufacturers, merchants, churches, schools and the United States Government.

FREE TRIAL AT OUR RISK

We offer to place the Rotospeed in your office on trial. Use it as if you owned it. We will send complete equipment and supplies. We will send you samples of Rotospeed letters, forms, etc., used by others in your line of business to increase profits and save expense. Mail the coupon NOW for booklet, samples and details of our Free Trial Offer.



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Send me, at once, booklet, samples of work
and details of Rotospeed Free Trial Offer.

Name _____
Address _____



ENTHUSIASM

ENTHUSIASM is the lubricant that overcomes friction in production—the use of good tools promotes and encourages Enthusiasm. In this period of insistent demand for the products of manufacture the importance of anything that tends to increase the output of man or machine is strongly emphasized.

Williams' Drop-Forged Machinists' Tools are sturdy and dependable—they have made good in quality and efficiency for nearly half a century. Their reputation is thoroughly established. Ambitious operators welcome an opportunity to use them, for "Better tools make better workmen."

An inspection of your equipment *now* may indicate where you could obtain increased production, or improved quality or both, through the lubricant of Enthusiasm, stimulated by the use of Williams' Superior Drop-Forged Machinists' Tools.

Copy of our new Machinists' Tools Book will be sent on request.

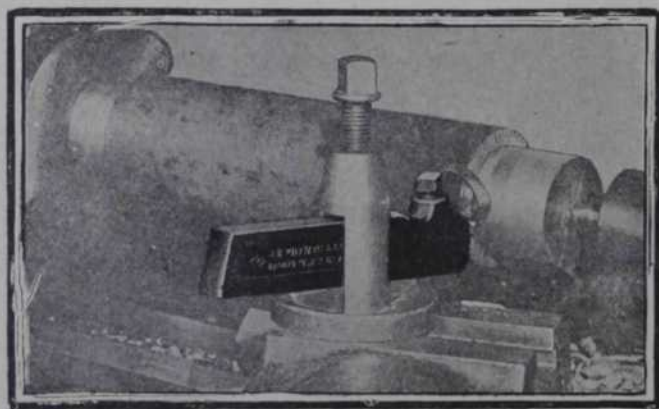
J. H. WILLIAMS & CO.

"THE DROP-FORGING PEOPLE"

BROOKLYN, N. Y. BUFFALO, N. Y. CHICAGO, ILL.

24 Richards St. 24 Vulcan St. 1024 W. 120th St.

Williams' Superior Drop-Forged Tools



tionately. If prices go down wages are to decline with them.

During their stay, the members of the delegation were the guests of the National Chamber at a banquet at the Shoreham Hotel. Sir Auckland Geddes, the British Ambassador and Joshua W. Alexander, secretary of the Department of Commerce, were among those invited to meet the British business men.

In his address, the British Ambassador pointed out that adequate world trade development by Great Britain and the United States required that both nations lay their cards on the table. He insisted that there was greater desire in Great Britain for close business cooperation with America than has been indicated by many American writers. He has learned from those writers, he said, "how diabolically clever the British, more especially the English, are, and with what Machiavellian duplicity the British push their trade."

"I believe that it is imperative that each country should play the great game of world trade, so important to us both, with its cards up on the table in so far as trade is supported and developed by national, that is, political, action."

Dangers of Secrecy

SECRECY breeds suspicion, the mother of hostility. I believe that full reciprocity in frankness is essential if we are to avoid difficulties. I believe most strongly that in spite of possible local diminution of profit, cooperation between our nations will pay us both best in the long run.

"If the English-speaking peoples work together, no half-baked Communists or militarist adventurers will long continue to disturb the resettling world."

Secretary Alexander in his remarks said that "the United States does not contemplate any attempt to drive other nations out of the shipping business. Quite the contrary is so. I am only stating what is fair when I say it is the policy of this country to own and to operate a fair share of the world's shipping."

Like other distinguished visitors who come to this country, the British business men made a pilgrimage to Washington's home at Mount Vernon. They were much impressed with the things of interest there.

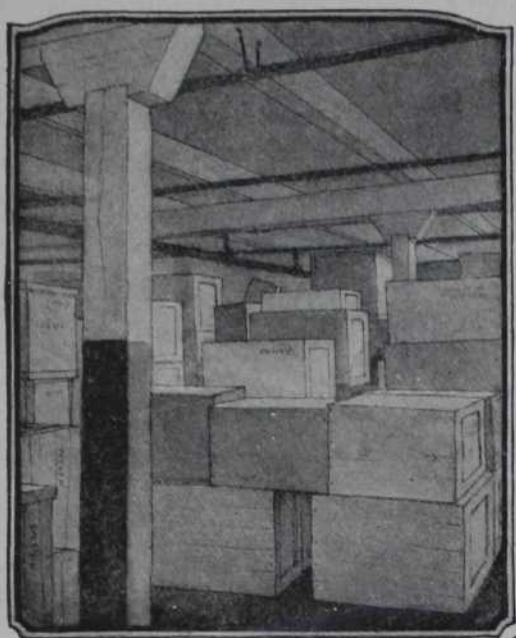
On the last day of their stay in Washington, the Britishers and a number of directors of the Chamber of Commerce were the luncheon guests of Sir Auckland Geddes at the British Embassy.

The delegation included: Mr. A. J. Hobson, LL.D., President; Sir Thomas Mackenzie, G.C.M.G., LL.D.; Mr. A. R. Atkey, M.P., Nottingham; Mr. Stanley Machin, J.P., President, London Chamber; Mr. J. A. Aiton, C.B.E., President, Derby Chamber of Commerce; Mr. W. F. Russell, Vice-President Glasgow Chamber; Mr. H. L. Symonds, Deputy Chairman of Council, London Chamber; Mr. F. J. Tompsett of Exeter; Mr. O. E. Bodington, British Chamber, Paris; Mr. Wm. Muir MacKean, of Glasgow; Mr. Frank Moore of Leicester; Mr. C. B. Carryer, of Leicester; Mr. Thomas Morley, of Leicester; Mr. T. S. Sheldrake, of the *London Times*; Mr. Barton Kent of London; Mr. R. B. Dunwoody, O.B.E., Secretary of the Association.

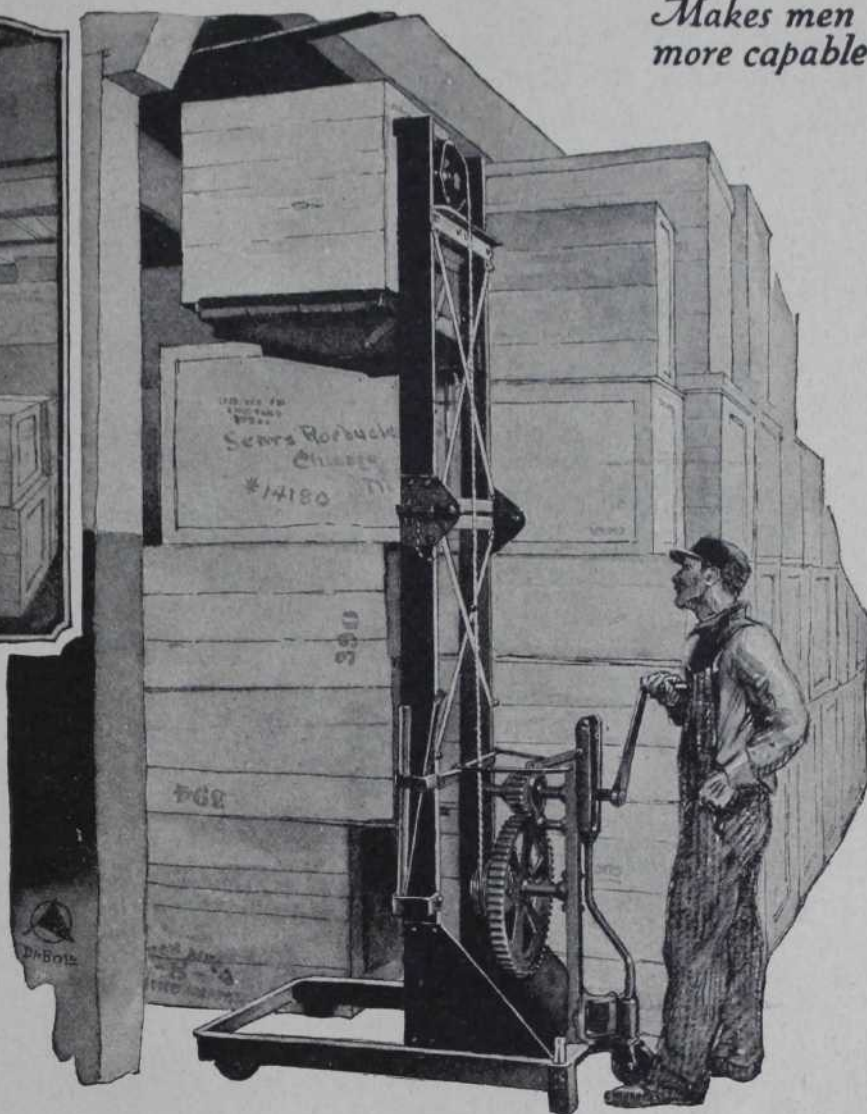
Notice

The full page advertisement of the Chamber of Commerce of the Tonawandas which appeared on page 45 of our October issue should have carried the address "Tonawanda, N. Y., and North Tonawanda, N. Y."

*Makes men
more capable*



*From photographs taken
in large mail-order house*



*Electric or
hand power*

And Now—"The Roof's the Limit"

WHERE once was empty, wasted space, you now find every cubic foot—*clear to the roof*—utilized for storage. It was a *physical* impossibility for men to pile the heavy cases straight up to the roof. But it was a *mechanical* possibility, as the pictures prove. Economy Storage Engineers easily solved this problem—just as they can solve *yours*.

For seventeen years they have been showing the better storage way to more than a hundred different lines of industry, saving them millions of dollars in space, in labor and in time. Whether you handle boxes, bags, barrels, bales or any other form of merchandise, you will be interested in our free booklet, "Economy in Storage." No obligation is incurred when you ask for it.

The ECONOMY
SYSTEM

ECONOMY ENGINEERING COMPANY

2659 West Van Buren Street, Chicago, U. S. A.

BOSTON NEW YORK PHILADELPHIA DETROIT ATLANTA SAN FRANCISCO

*How much space
are YOU wasting?*

ECONOMY PORTABLE ELEVATORS and STORAGE RACKS

The P. A. X. is a vital necessity in modern business operations. Its equipment and services offer a standard unit which solves and co-ordinates the interior communication problem. The P. A. X. augments and completes, but neither connects with nor supplants local and long distance telephone service.



Protect Your Investments with The P.A.X.

THE Automatic Electric Services of the P.A.X. (Private Automatic Exchange) protect investments by saving time and labor, simplifying detail and promoting co-ordination throughout your business organization. These services soon pay for their installation by cutting into overhead expenses, thus quickly releasing capital for other uses. In hundreds of America's foremost commercial and industrial institutions the P.A.X. has protected other investments by proving itself to be an investment—not an expense.

The Automatic Telephones of the P.A.X. at all times, for 24 hours every day, give prompt, accurate and secret interior communication.

The Code Call of the P.A.X. locates instantly any official or department head and puts him in communication with those who seek him.

The Conference Wire of the P.A.X. enables several persons to hold a round table discussion with secrecy, dispatch and

accuracy, without leaving their desks.

The Watchmen Service of the P.A.X. perfects the human protection thrown around a plant and makes every telephone a fire alarm or danger signal by which help can be instantly summoned.

These and many other unified services that protect investments, speed production and lower costs, are given over a single pair of wires operated by a simple dial.

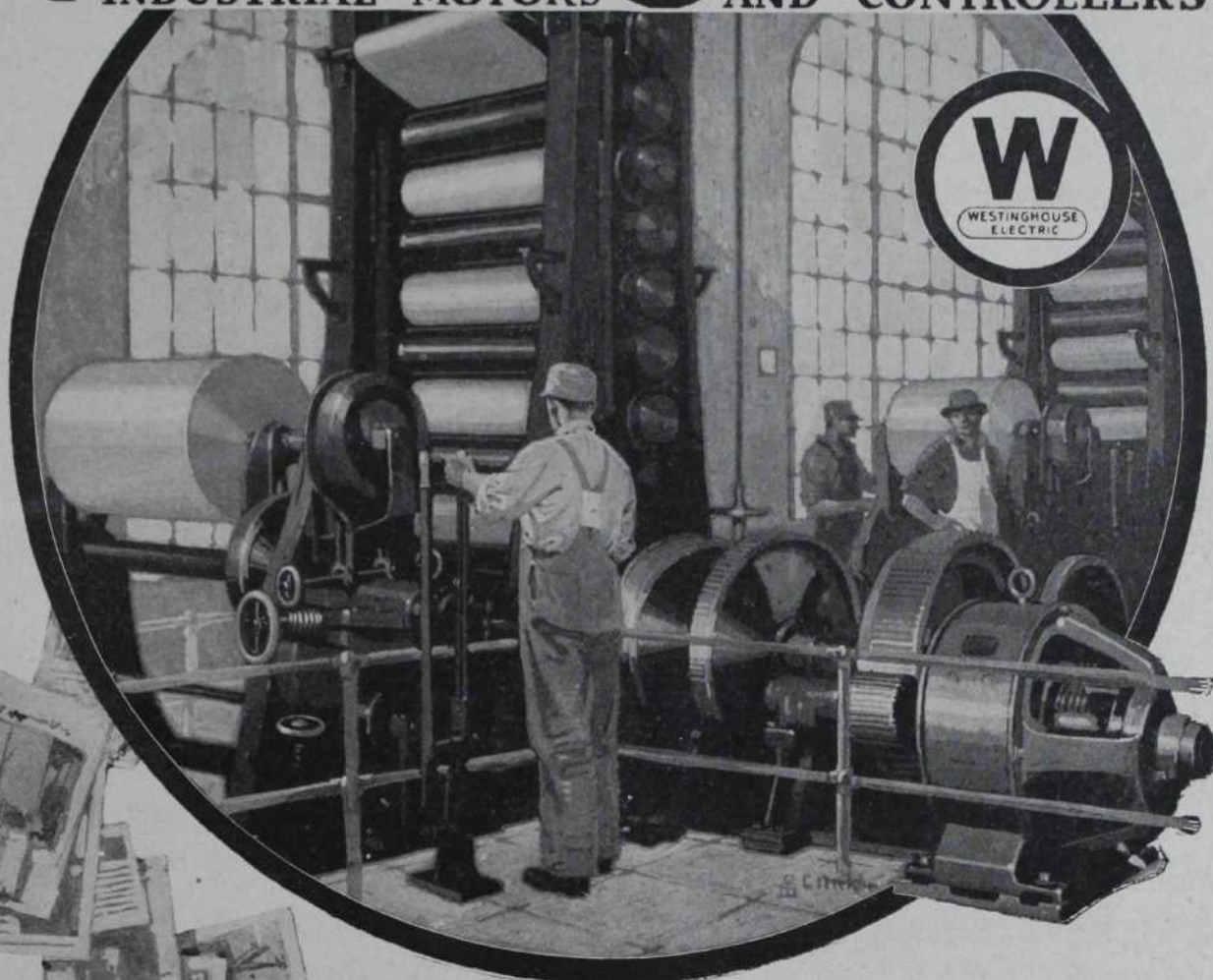
Investigation will prove the value of the P.A.X. to your organization. A booklet giving further details will be gladly sent upon responsible request.

AUTOMATIC ELECTRIC CO.
Dept. 165 1001 Van Buren Street
CHICAGO

Among thousands of American industries this dial has become the symbol of perfected organization. It controls all the automatic electric services of the P.A.X.—paging, fire alarm, burglar, watchmen service, conference and interior telephone calling.

Westinghouse

INDUSTRIAL MOTORS AND CONTROLLERS



Bring the Power to the Paper !

Means must be found to relieve the world-wide paper shortage which has been such a serious problem to every publishing interest during the past few years.

To produce more paper is not so easy as it sounds, but paper makers who use *electric power* are nevertheless finding it particularly useful in the solution of this problem.

The big advantage of electrification in this situation is the fact that you can think about process

first and power afterward. You can place machines where the requirements of your process dictate, and locate the motors above, alongside, or below—wherever operating conditions require.

In original installations, and for emergency purposes, Westinghouse Motors and Westinghouse Engineering are serving the paper-making industry as they serve others, capably and economically adapting the power to the process.

Owners' Faith in Wells Brothers Construction

Repeat orders prove owners' satisfaction with Wells Brothers' services in building. Twelve clients whose initial contracts totalled \$4,850,000 have let 53 repeat contracts to us aggregating nearly forty million dollars.

Contracts			
	Number	Value of first	Aggregate Value
Retail mail order house	7	\$450,000	\$8,750,000
Canadian packing house	4	150,000	1,500,000
Canadian mail order house	5	400,000	2,100,000
Western packer	4	150,000	750,000
Wholesale mail order house	4	500,000	4,750,000
Vehicle manufacturer	4	400,000	2,000,000
University	4	650,000	2,500,000
Southern hotel	2	600,000	2,250,000
Public service company	12	250,000	7,500,000
Club	2	600,000	1,350,000
Mid-west manufacturer	2	500,000	2,750,000
Hotel	3	200,000	3,000,000
	53	\$4,850,000	\$39,200,000

Wells Brothers Construction Co. will bring the experience of fifty years to bear upon your problem.
You will pay only actual net cost plus an agreed service fee.
You will get the best building for the least money

Wells Brothers Construction Co.

Monadnock Block — Chicago

"Wells Built means Built Well"

To Represent the U. S.

FREDERICK P. KEPPEL, at present Director of Foreign Operations of the American Red Cross and formerly an assistant secretary of war, has been chosen by the Chamber of Commerce of the United States to be the American Administrative Commissioner at the headquarters of the newly formed International Chamber of Commerce at Paris. Each of the countries having membership in the International Chamber, with the exception of certain small ones which will be represented by groups, will be entitled to maintain a commissioner and staff of experts at Paris.

There will be created at the headquarters of the National Chamber in Washington an International Chamber section, which will take care of affairs in the United States connected with the International Chamber. A committee of about 25 business men will be named to act as advisory body to this section. The committee will supervise among other things American memberships in the international organization.

Mr. Keppel will leave for France to take up his new duties as soon as he can do so without prejudice to the work upon which he is now engaged.

When the United States entered the World War Mr. Keppel obtained leave of absence from his post as Dean of Columbia College, and entered the War Department. His work brought him in constant contact with the various civilian organizations cooperating with the War Department in the care and training of the Army.

While at Columbia, where he received his A. B. degree in 1898, Mr. Keppel served for a number of years as secretary of the American Association for International Conciliation. He has received honorary degrees from the Universities of Pittsburgh and Michigan, and is a Chevalier of the Legion d'Honneur of France.

As director of foreign operations Mr. Keppel was responsible for the expenditure of \$51,000,000 in relief work in foreign lands in the past year. Many thousands of tons of supplies were distributed through huge warehouses at Constantinople, Riga, Mitau, Reval, Viborg, Warsaw, Saloniki, Marseilles, Paris and other centers.

All this work has brought Mr. Keppel in close touch with the situation in Europe. Within the past year he has made two trips to Europe in behalf of the Red Cross, and made a study of conditions in Poland and other new countries of Central Europe.

Starting Villa Off Well

REVOLUTIONARY to ranchman, operating in a big way, is the transition through which Francisco Villa is now passing. The ranch given him by the Mexican government measures up in area to the requirements of a patriarchal estate, as it runs into the thousands of acres. Working is to be on a corresponding scale. The initial equipment in tractors, motor trucks, plows, harness, picks, shovels, and all the other old and new mechanical aids to agriculture is to cost about \$150,000.

REQUESTS for 57,000 reprints of "Banking Fancies—and the Facts," the reply of Mr. George E. Roberts to Dr. Frederic Howe, have led us to bring it out in pamphlet form. It may be obtained in quantities by those desiring to distribute it, at cost of manufacture, \$10.00 per thousand. Address THE NATION'S BUSINESS, Mills Building, Washington.



A Dividend Check Every Month—Yield 8%

FOR the investor who seeks to combine liberal income return with stability of market, Preferred Stocks of sound and well-managed industrial corporations are unusually attractive purchases at present yields.

We have selected the 8% Preferred Stocks of three old-established New England industrial corporations which, in combination, pay a dividend on the first day of every month and yield a net

8%

May we send you descriptive Folder N. B. 373?

Hollister, White & Co.

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50 Congress Street
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North American Building
PHILADELPHIA

Providence, R. I. Springfield, Mass. Pittsfield, Mass. Portland, Me.
Hartford, Conn. Albany, N. Y. Syracuse, N. Y. Newark, N. J.



BUREAU OF CANADIAN INFORMATION

The Canadian Pacific Railway, through its Bureau of Canadian Information, will furnish you with the latest reliable information on every phase of industrial and agricultural development in Canada. In the complete Reference Libraries maintained at Chicago, New York and Montreal is complete data on natural resources, climate, labor, transportation, business openings, etc., in Canada. Additional data is constantly being added.

No charge or obligation attaches to this service. Business organizations are invited to make use of it.

DEPARTMENT OF COLONIZATION AND DEVELOPMENT

Chicago
165 E. Ontario St.

Montreal, P. Q.
355 Windsor Station

New York
1270 Broadway

A White Collar Union at Work

The public, no longer ready to be ignored in Denmark, pitched in and broke the big strike of longshoremen

By JOYCE O'HARA

COMPARATIVELY unnoticed in this country, Denmark has undertaken the solution of the protection of the public in industrial disputes affecting the national welfare.

Denmark has effected an organization of the public where previously, as in other countries, only the workers and employers were organized. The right of society to protect itself when attacked by a strike imperiling the life of a community, as was invoked by the United States courts last year by the use of the injunction in the coal strike, has been solved by Denmark in the organization of the general public.

Through the organization of the Social Aid Association, recruited from the ranks of every class of society, the public of Copenhagen in the spring of this year succeeded in breaking the unauthorized strike of longshoremen, stokers and seamen in the port of the Danish capital in but a few weeks. Composed of some 7,000 members in Copenhagen and consisting of some 30 affiliated organizations in other parts of the nation, the association was formed by the public for the purpose of placing its members at the disposition of the government in any labor conflict which threatened the interests of society as a whole. Its use in strictly private controversies between capital and labor is specifically forbidden.

Denmark, more than most other countries, finds itself dependent upon the outside world. Moreover, engaged chiefly in the exportation of perishable agricultural products, she stands to face heavy losses if prevented from shipping them. In the presence of these conditions, longshoremen, stokers and seamen in Copenhagen early in the year felt themselves able to hold up their employers for higher wages with impunity despite unexpired agreements.

They succeeded for six weeks. Then the public, exasperated by a long series of grievances arising from such flagrant instances of

opportunism, decided to take hold itself. The Social Aid Association was organized, thousands of men of all classes and occupations enlisted as members and the port of Copenhagen became in a few days as busy as a hive. Steamers by the score were loaded and unloaded and sent on their way with crews of volunteers, and inside a few weeks the strike was broken and conditions restored to a normal basis.

An Associated Press dispatch sent out from New York during the duration of the strike reported the arrival of the Danish liner, the Frederick VIII, in the United States from Copenhagen "with one of the strangest crews on record," made up of members of the Social Aid Association. Besides regular seamen and laborers, the crew was composed of farmers, students, merchants, bankers, doctors, lawyers and stockbrokers, some young, others middle aged, but all working as the regular crew, receiving the same wages and sleeping in the crew's quarters.

It Isn't Anti-Labor

IN DENMARK the Social Aid Association is not regarded as an anti-labor or anti-strike organization. Its one purpose is the protection of society. There is no question in Denmark of the right of the worker to organize, for in no country is the worker any more thoroughly organized. The question which the Social Aid Association raised was the right of a small number of workers to menace all society for the sake of personal advantage.

There was, undoubtedly, radical undercurrent in the strikes in Denmark from which the association sought alleviation. Attempts were made to disrupt the Danish labor unions, which, though socialistic, have always been moderate in their policies, by unauthorized strikes in an effort to discredit the leadership of the moderates. This movement, it was discovered, was supported by soviet Russia.

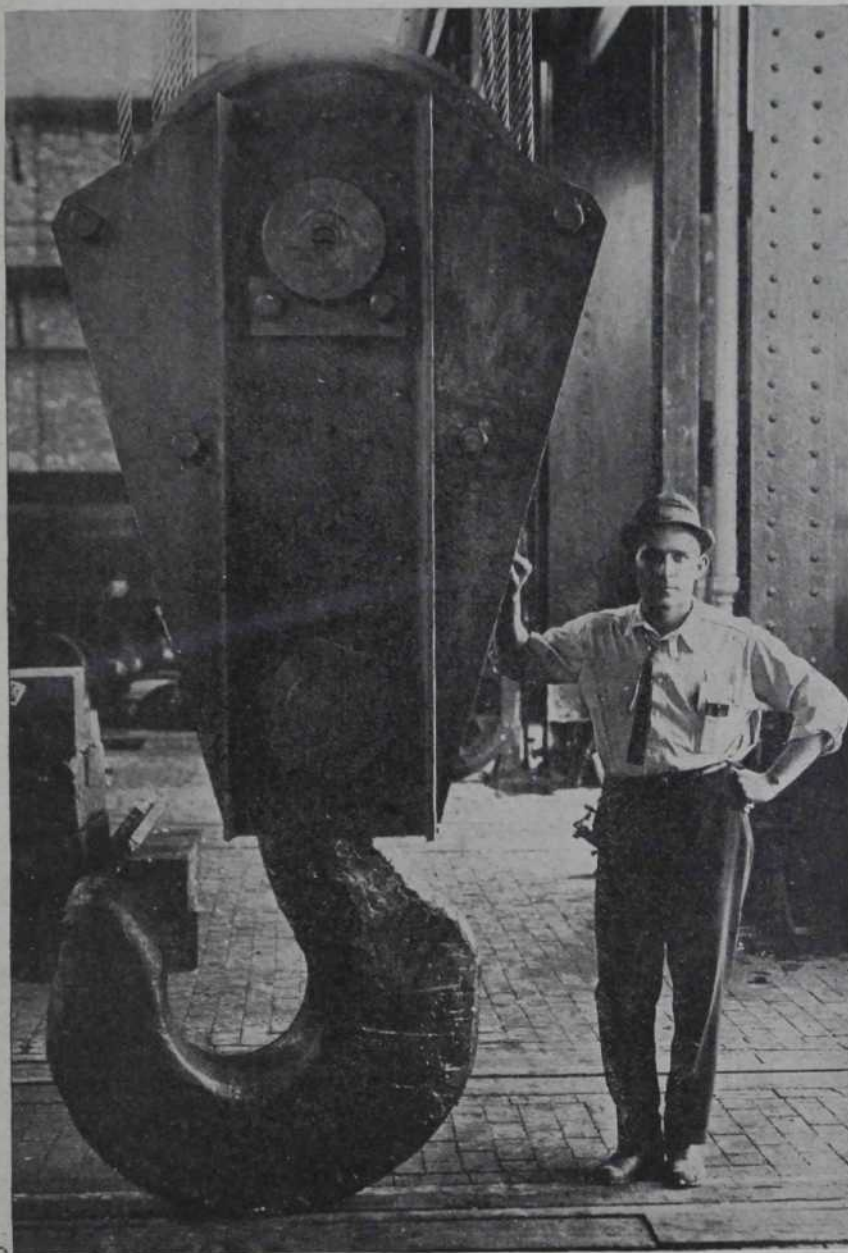
(Continued on page 81)



From Punch

Deputation of stage hands threatens to walk out if Coriolanus refuses to modify his contemptuous attitude toward the plebeians.

Austin Equipment Service



One of the Big Hooks used
on the 250-ton Bridge Crane
for lifting heavy locomotives at
the Pennsylvania Lines Erect-
ing Shop, Logansport, Ind.

AUSTIN

STANDARD AND SPECIAL FACTORY-BUILDINGS

The complete equipping of a new manufacturing unit or plant extension is an important part of Austin Service. This arrangement places undivided responsibility upon the Austin organization for the entire building project—from preliminary plans to actual production.

Equipment Installation that Saves the Owner's Time and Money

POWER, HEATING, and VENTILATING: This includes the installation of complete power plants, furnaces, piping, radiators, etc. Direct or indirect heating systems as well as blower and suction system can also be installed and equipped. Power equipment can be accurately calculated and provision made for alterations in existing layouts. Full allowance can also be made for future developments.

PLUMBING: Austin plumbing includes—toilet rooms, wash rooms, shower rooms, and their equipment; water supply systems, drinking fountains, sewage disposal plants, sprinkler systems with storage tanks and towers. Toilets, showers and lockers can frequently be placed in the monitor, allowing floor space free for production.

ELECTRICAL WORK: Lighting systems are installed by expert illuminating engineers. Power wiring is provided for cranes and motors—ready for connection.

It is just as much a part of Austin Service to install Power, Lighting, Heating and Sprinkler Systems as it is to design and erect factory-buildings.

The Austin Book of Buildings describes complete industrial building and equipment service. A copy will gladly be sent to you upon request.

The AUSTIN COMPANY, Cleveland, O.
Industrial Engineers and Builders

For U. S. A. and Canada, address nearest office

Cleveland	New York	Philadelphia	Chicago
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Export Representative:

International Steel Corporation, 51 Chambers St., New York City

HOTEL PENNSYLVANIA

Opposite Pennsylvania Terminal New York

You Are Not Merely Our "Guest"

I've often felt that the word "guest" failed to express the real way we look at you who visit us at Hotel Pennsylvania.

When you visit a friend you feel under obligation to accept what ever hospitality he can offer, however humble it may be. You know you are his "guest"; you would never violate the spirit of hospitality by a critical attitude.

You are under no such obligation here. Hotel Pennsylvania is *your home*. You are more than a guest. You are in a sense a *host*. The hotel's conveniences are your conveniences, its servants your servants, its hospitality your hospitality which you offer to your friends at luncheon, dinner, dance, afternoon musicale, or whatever else may be the place or occasion.

As in your home you want the human element to contribute to your guests' comforts, so in Hotel Pennsylvania we try to make employees feel that it is you whom they serve—not the management. We want them to meet *your* wishes.

If in any instance they fail to do this, as of course they sometimes do, being human, you will do us a service by taking up the matter with me personally. It's just that sort of co-operation which has helped me do the things that cause experienced travelers to say the Pennsylvania is as near "like home" as a hotel can be, considering the infinite variety of personal tastes in its big and ever-changing family.

Emstaten



Hotel Pennsylvania, with its 2200 rooms, 2200 baths, is the largest hotel in the world—built and operated for discriminating travelers who want the best there is.

Associated with it are the four *Hotels Statler* in Buffalo, Cleveland, Detroit and St. Louis;

and each of these five hotels makes reservations for all the others. All have private baths, circulating icewater and other unusual conveniences in every room. An entire block of ground in Buffalo has just been bought, for a new Hotel Statler.

For a year and a half there was no organized protest by the Danish public, as it was realized that it was only natural that the dock workers might be expected to receive some increase of wages for the betterment of their conditions in view of the increase in the cost of living and the great profits realized by the shipping companies during and after the war. But as one strike succeeded another at the harbor of Copenhagen and the loss to the country mounted higher and higher, there came a day when the Danes cried "Stop!" and took matters in their own hands.

Finally, what appeared to be a general and complete agreement between capital and labor was reached in April, 1920. However, the ever-striking longshoremen, seamen, and stokers refused categorically to ratify the agreement. Though morally bound by the consent of the labor leaders to the general settlement and though legally prohibited from striking by their own agreements, nevertheless the longshoremen, stokers and seamen laid down their tools and declined even to negotiate.

The employers, strongly supported by public opinion, decided to fight it out. They first brought the matter before the permanent arbitration court, which sentenced the three unions to pay a fine of one million kroner on the ground that the strike was illegal. But the strikers only laughed at the fine, as the treasuries of their unions were nearly empty, and the only satisfaction the employers could get was the declaration of insolvency of the striking unions.

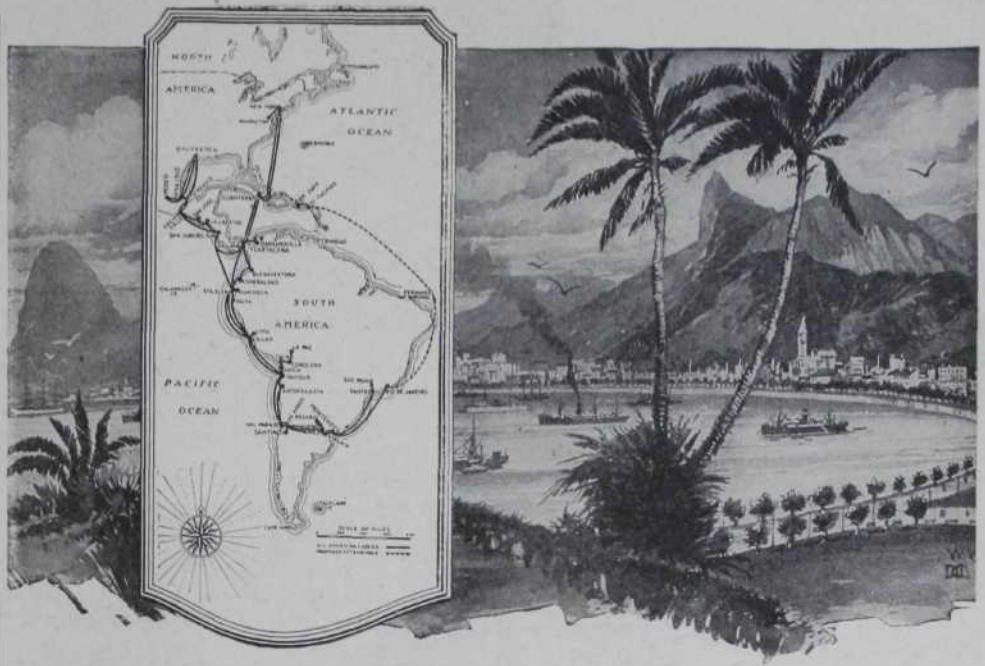
The Farmers Helped

THEN it was that the Danish public stepped in and took matters into their own hands. The farmer organizations called on their members and got their export going again. They loaded the ships and manned them with their own men, assisted by fishermen and seamen who did not approve of the strike. From the first week of May until the middle of June, when the strike ended, the farmer volunteers shipped from Denmark butter valued at about \$14,000,000, pork worth \$3,500,000 and eggs worth \$1,600,000. In short, the export of agricultural products from Denmark grew to normal proportions, and the Danish farmer showed the striking seamen, stokers and dock workers that he was well able to take care of every side of his complicated business.

The city man was no shirker either. He also proved his worth in the emergency through the agency of the Social Aid Association.

A few weeks after the farmers had started to break the strike, the Danish Government Departments of the Interior, Commerce and Public Works officially requested the Social Aid Association to unload the ships in the harbor of Copenhagen. The association took hold at once. The first day it sent 200 men to work unloading the ships, the next day 350, the next again 500, and the force grew from day to day, till it reached the number of about 1,700. Of this number, some men worked steadily all during the strike, while others only worked a few days at a time and then were replaced by others.

All kinds of men volunteered for the work. The strikers had by that time antagonized everybody, including their own fellow workers. Although there was no conflict between the strikers and the municipality of Copenhagen, controlled by the socialistic labor unions, the dock workers, nevertheless, refused to unload coal and coke for the city administration. They had to give in, however, when other labor unions threatened to do the work, but their purpose was plain and added to the



RIO DE JANEIRO

Capital and Gateway of Brazil

One of the world's greatest ports through which Brazil exported, in 1918, to the United States, \$113,511,954 in merchandise. Brazilian beef-hides—coffee—sugar—rubber—wheat, etc., are necessities demanded by every nation.

"Rio" is eighteen days from New York by mail but in order to facilitate instant communication or news and business, this great port is kept in constant touch with the United States by All America Cables.

All America Cables are one of the great forces in upbuilding the commerce and friendly relations of the Americas, tying together the principal cities of the New World. They are the only direct and American owned means of cable communication.

"Like the threads of a giant web ALL AMERICA CABLES radiate out from New York commercially enmeshing Central and South America."



JOHN L. MERRILL, Pres.
Main Cable Office
81 Broad Street, New York

To insure rapid, direct and accurate handling of your cables to Rio de Janeiro, Santos and all points in Brazil, mark them "Via All America". These words are transmitted free of charge by all telegraph and cable companies.

ALL AMERICA CABLES

What advantages does your city offer this manufacturer

?

A large hardware manufacturing company, established over seventy-five years, with the highest mercantile rating, occupying a ground floor space of 225,000 square feet, with an annual payroll of over \$1,000,000, employing over seven hundred male hands, is compelled to move, and will consider a proposition to relocate.

Would like to hear from any live town which can furnish the above number of employees and is anxious to have this industry located in its midst.

State in detail, freight facilities, availability of help, power cost, and any special inducements it can offer to secure this industry.

Box 105

THE NATION'S BUSINESS

Washington, D. C.

indignation and resentment against them.

In about four weeks the volunteers unloaded and loaded about 200 ships and did all work in connection herewith in the warehouses and silos at the harbor and free port of Copenhagen. From May 12 till June 8 they dispatched 170 vessels with a total tonnage of 530,000 tons from Copenhagen.

There was nothing that the Danish volunteers did not seem capable to do. They manned the cable steamer "Hans Christian Oersted," and took care of the Danish telegraph cables in the North Sea. They brought the largest Danish steamer, the trans-Atlantic liner, Frederick VIII, to New York and back in record time. They reestablished the regular routes between the Danish Isles and Jutland, between Copenhagen and North Slesvig, as well as on Great Britain and the Baltic ports.

The striking longshoremen went back to work in the latter part of June. Seldom, if ever, has a strike been more completely defeated than theirs. The shipowners showed no revengeful spirit, but in several respects bettered the conditions of the strikers.

A great precedent had, however, been established, namely, that the public was no longer to be at the mercy of whatever small class of workers that, in disregard of legally concluded agreements, conspired to gain a personal advantage by stopping all or some important part of the highly complicated machinery of modern society.

Government Control of Pigs

FROM time to time we are reminded that we have much to learn from Great Britain in matters of governmental efficiency. From British sources we gather this story of patriotic pig raising under government control.

Urged to raise pigs to meet the food shortage, a loyal Briton bought two for about \$20 and built them a sty in his garden. Then he learned that he was a farmer and must register as a breeder of swine. His next lesson in the beauty of government control came in the shape of a notice that food for pigs had been rationed and that he could not buy it without a form. By the time the form came both pigs were ill. Result: a veterinary bill of \$30, but only one pig died. Then came three policemen, who decided that swine fever might have been the cause and told him he couldn't bury the pig without an autopsy. A week later came an official pig doctor, who said the cause of death was lack of food.

One more week and the Board of Agriculture officially freed the farm of all taint of swine fever. Then the loyal Briton killed the other pig and reckoned that his pork had cost a little more than \$2 a pound.

That was the end of the pigs, but not the end of government control. The patriotic pig-raiser is told that he is a farmer and will be taxed about \$35 on his "farm."

Keeping Your Cake and Eating It Too

SANCTUARIES for fur-bearing animals as one means of keeping up the supply are urged by the Department of Agriculture, whose Biological Survey tells this story of the increasing worth of fur:

One man bought a mink-lined coat complete in 1913 for \$500; after wearing the coat two years he sold the lining for \$1,000 and replaced it with nutria at a cost of \$150; in 1917 he sold the nutria lining for \$250 and put in a muskrat lining at a cost of \$55; in 1918 he sold the muskrat lining for \$300 and still has the shell of the coat and a clear profit of \$845.

What is Ahead of Your Business?

Many manufacturers now face sharper competition and lower prices. What new conditions confront you?

You may not be able to show a satisfactory profit this coming year unless you take advantage of many small savings.

Have you perfected your production and cost methods to a point where they reveal such opportunities? If not we can help you.

Permit us to send you a statement of our methods of work, experience, and clientele.

GRIFFENHAGEN & ASSOCIATES, LTD.

INDUSTRIAL ENGINEERS.

ACCOUNTANTS, AND

EMPLOYMENT ADVISORS

116 South Michigan Avenue
CHICAGO

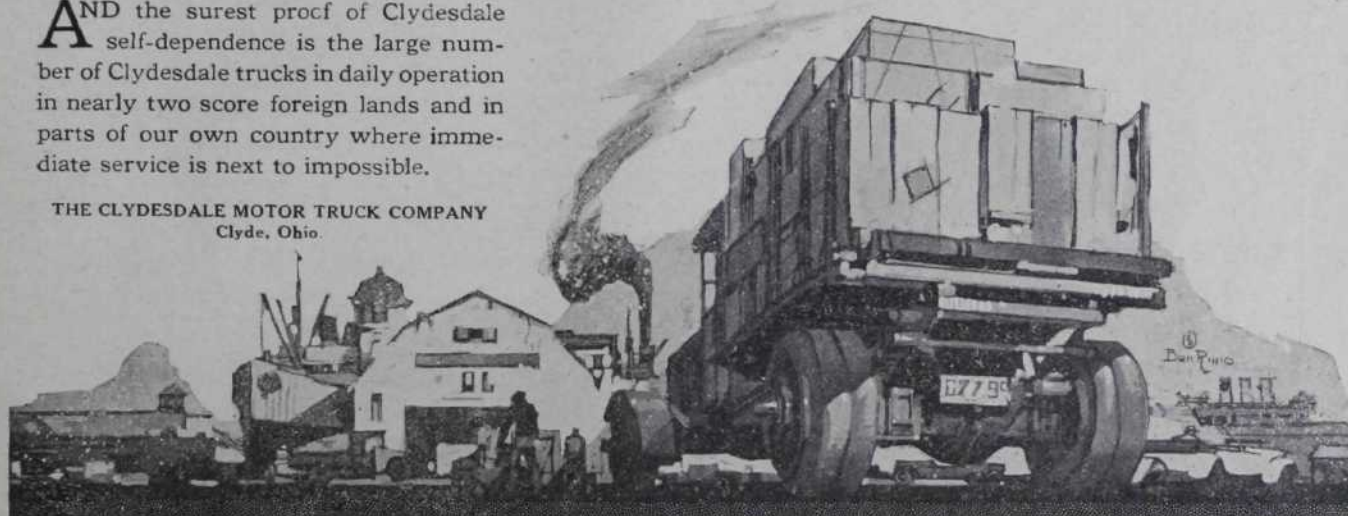
DEPENDABILITY

ONE TRUCK ON THE ROAD IS WORTH TWO IN THE SHOP

THE motor truck is only profitable if it is kept moving. To keep on the road and out of the shop, a truck must meet two important conditions: it must first be dependable in itself, and then it must be properly serviced. Dependability is paramount, though, for sometimes a truck must operate where service is not always instantly available.

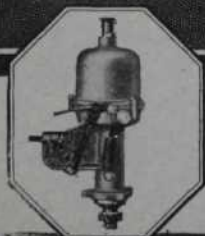
AND the surest proof of Clydesdale self-dependence is the large number of Clydesdale trucks in daily operation in nearly two score foreign lands and in parts of our own country where immediate service is next to impossible.

THE CLYDESDALE MOTOR TRUCK COMPANY
Clyde, Ohio.



CLYDESDALE

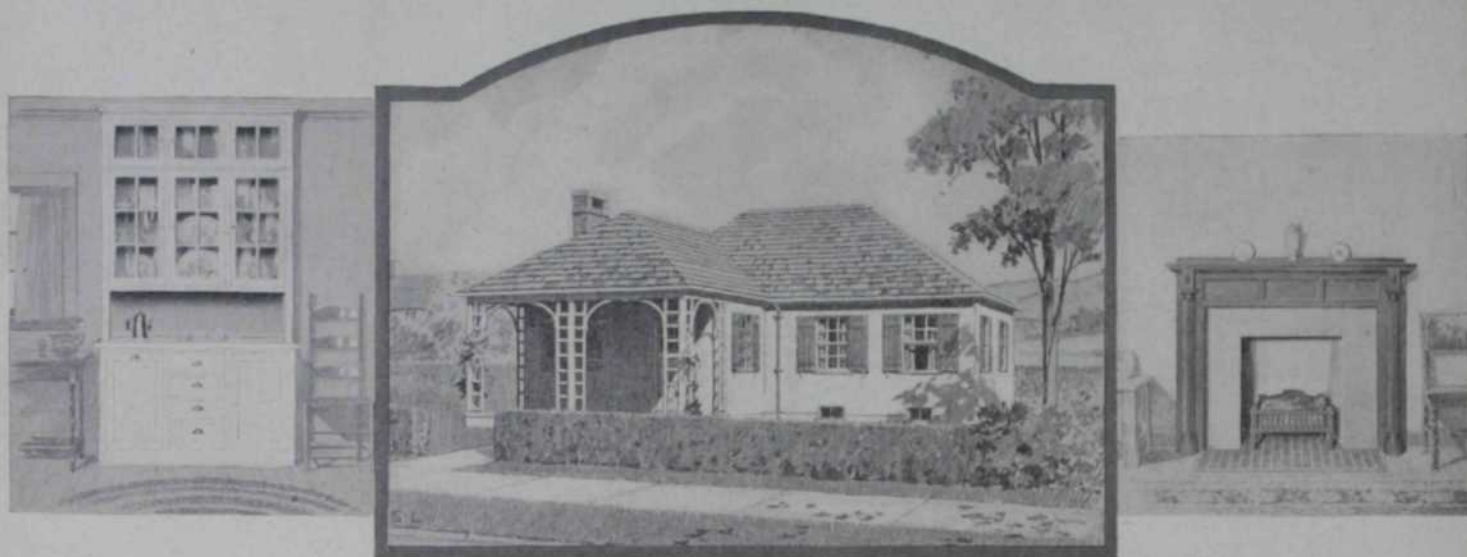
MOTOR TRUCKS



An Added Feature of Dependability

The Clydesdale Controller makes this truck reliable because it insures positive action under all conditions. By regulating the

motor speed to accomplish just what is necessary, no more or no less, this automatic device prevents truck abuse.



Houses or Homes for Your Workmen?

LATELY we hear much about "industrial housing." The forward-looking executive realizes the obligation he owes his men and his business to help the men find places to live.

But what is "a place to live"—a shelter from the weather? Is that all *your* home is to you?

No. Home, for the wage-earner as well as for the executive, is a place of rest, a place where there is comfort and beauty.

Curtis Woodwork can do much to make a house into a home.

It adds comfort, because Curtis Woodwork comprises such things as doors, windows, trim, and built-in furniture, which keep out the weather, make housekeeping easier, and make for convenience.

It adds beauty, because Curtis Woodwork is of good design. It recognizes its place as an architectural part of the house itself. Nearly every item, from the smallest cornice moulding on the outside to the stairway on the inside, has been designed expressly for the Curtis Companies, by Trowbridge and Ackerman, architects, of New York City.

Yet this architectural woodwork is not costly. This is because it is standardized and is produced in quantity, with the savings of quantity production passed on to the user.

The story of Curtis Architectural Standardized Woodwork is an interesting one. It has been profitable to many backers of industrial housing enterprises to hear it. May we tell it to you? Write us for a complete account.

CURTIS SERVICE BUREAU, Clinton, Iowa

The makers of CURTIS Woodwork guarantee complete satisfaction to its users. "We're not satisfied unless you are."

*Manufacturing and Distributing
Plants at*

OKLAHOMA CITY, OKLA.
DETROIT
LINCOLN, NEB.
SIOUX CITY, IOWA
WAUSAU, WIS.
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1866
CURTIS
WOODWORK

"The Permanent Furniture for Your Home"

CLINTON, IOWA
DAYTON, OHIO
CHICAGO

Eastern Offices at

PITTSBURGH
BALTIMORE
AKRON
NEW YORK

UNITED STATES SHIPPING BOARD

Offers for Sale 377 SHIPS

Bids will be received on a private competitive basis from now on in accordance with the Merchant Marine Act at the office of the United States Shipping Board, 1319 F Street N. W., Washington, D. C.

The three hundred and seventy-seven ships offered for sale consist of ninety-two steel ships and two hundred and eighty-five wooden steamers.

The steel steamers are both oil and coal burners. The board has established a minimum price on these vessels.

Terms on Steel Steamers

10% of the purchase price in cash upon delivery of the vessel; 5% in 6 months thereafter; 5% in 12 months thereafter; 5% in 18 months thereafter; 5% in 24 months thereafter. The balance of 70% in equal semi-annual installments over a period of ten years; deferred payments to carry interest at the rate of 5% per annum.

The two hundred and eighty-five wooden steamers for sale consist of ten different types, as follows: Nine Daugherty Type; Seventeen Ballen Type; Ten Peninsula Type; Six Pacific American Fisheries Type; One Allen Type; One Lake and Ocean Navigation Company Type; Thirteen McClelland Type; One Hundred and Eighty-six Ferris Type; Thirty-one Hough Type; Eleven Grays Harbor Type.

Terms on Wooden Steamers

10% cash on delivery. Balance in equal semi-annual installments over a period of three years.

Bids may be submitted for one or more vessels or for any combination of above vessels, and must be accompanied by certified check made payable to the U. S. Shipping Board for 2 1/2% of amount of the bid.

Bids should be submitted on the basis of purchase "as is and where is."

Further information may be obtained by request sent to the Ships Sales Division, 1319 F Street N. W., Washington, D. C.

The board reserves the right to reject any and all bids.

Bids should be addressed to the UNITED STATES SHIPPING BOARD, WASHINGTON, D. C., and indorsed "BID FOR STEAMSHIP (name of ship)."

Business Interdependence

By HOMER HOYT

THE simplest organisms, like the amoeba, have no specialized organs. Each cell is a jack of all trades, performing the work of a stomach, nervous system, eyes, ears, etc. The more highly developed forms of life are not so simply constructed; they have specialized organs whose function it is to do one particular thing for the entire organism.

The first forms of business life were like the amoeba. The industrial life of England in the middle ages was the elementary substance out of which our modern business world has grown. A moving picture of business in those days would show its entire lack of specialization.

Each manor or village grouped about the lord's castle was a little self-sufficing entity like the amoeba. Each little manor cell fed and clothed itself, without help from any other manor cell or the outside world. Each man in the village was a composite landlord-laborer and capitalist, for every man had his tools and his land to work upon. Each man was also a consumer of the things he produced himself. Since he produced everything, he must necessarily be a jack of all trades, a farmer, shoemaker, tailor, etc.

There Were No Middlemen!

THERE were no middlemen, since consumer and producer were the same person and nothing was required to bring them together. There was no separation between city and country, since the population was evenly spread over the land and every man was both a farmer and a manufacturer.

Contrast 1300 with 1900 and see what a change six centuries has brought. Within so short a time measured in biological terms an entirely new business organism has been developed with specialized functions and interdependent parts. Now we have many kinds and varieties of specialization.

We have specialized producing classes, such as landlords, laborers and capitalists. The labor is a distinct productive organ, owning no land or tools and furnishing his labor power at so much per hour. The capitalist likewise has grown into a specialized class of investors. True it is that a man may be both capitalist and laborer, but as such he exercises two distinct functions.

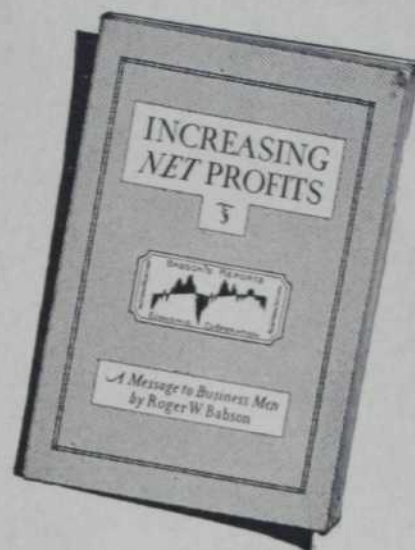
We have specialization of labor, or division of labor. Men are no longer jacks-of-all-trades, but they concentrate on one particular kind of work.

We have specialization between consumer, producer and middleman. Men produce and consume, but the same man does not produce all the things that he consumes. A man produces one thing and consumes a hundred. Consequently there must be middle men to collect the products of the producer and distribute them to the consumers.

We have specialization between the city and the country. Farmers devote all their time to farming and the cities to manufacturing and the products of the one are exchanged for the products of the other.

We have specialization between different countries and different climates. Instead of trying to produce everything we need in one state or country, we concentrate our efforts upon the crop best suited to the climate. We raise bananas in the West Indies, rubber in Brazil, cotton in the southern United States, wheat in western United States, oranges in California, etc.

We have specialization of the sciences.



What Makes Millionaires?

ROGER W. BABSON studied the hundred leaders of our commercial world and the businesses they built.

He found some very interesting facts on the effects of heredity, environment and training. But more important, he discovered a principle of doing business—the principle that has built every great business in America. It is simple, for it can be clearly stated in a single sentence. It is unusual, for it will practically double the net profits of any business large or small.

You will find the whole story—facts, figures and principle—in the new Babson booklet, "Increasing Net Profits."

Write Today

A copy of this Booklet will be sent to interested executives, gratis. Send for it today.

Tear out the Memo—now—and hand it to your secretary when you dictate the morning's mail.

Merely Ask for Booklet Y-41.

BABSON'S

Wellesley Hills, 82, Boston, Mass.
The Largest Organization of Business Advisors in the World.

MEMO FOR YOUR SECRETARY

Write Roger W. Babson, president of the Babson Statistical Organization, Wellesley Hills, 82, Boston, Mass., at follows: "Please send me a copy of booklet Y-41 'Increasing Net Profits'—gratis."

Tycos

TEMPERATURE INSTRUMENTS
INDICATING - RECORDING - CONTROLLING



REALIZATION

TEMPERATURE instruments must be built upon two basic factors: the dictates of science: the requirements of industry.

In the building of Tycos Temperature Instruments this formula is rigidly adhered to. The net result is that each completed Tycos product is reliable.

That is the underlying reason why the world's great industries are today standardizing on Tycos Temperature Instruments—Indicating, Recording, Controlling.

There are Tycos Temperature Instruments specifically designed for every need. Our experience with manufacturers in every industrial field is available in solving your own problems.

Tycos Products include:

Indicating Thermometers
Recording Thermometers
Controlling Thermometers
Pyrometers
Pressure Gauges
Vacuum Gauges
Time Controls
Hygrometers
Hydrometers
Barometers
Thermographs
Altimeters
Oil Test Instruments
Household Thermometers
Actinometers
Laboratory Glassware
Compasses

FF-3

Taylor Instrument Companies
ROCHESTER N.Y.

There's a Tycos or Taylor Thermometer for Every Purpose

Some men concentrate on physics and chemistry and others on finance and economics. Business is specialized into the technical work of production and the task of advertising and marketing the product.

Business has become further specialized in a thousand ways. Each major industry like iron and steel or lumber is split up into a thousand subdivisions. Each subdivision of trade calls for a like subdivision of technique, finance, shipping, labor, capital, management, etc. For instance, the making of furniture is in turn subdivided into the making of piano stools, davenport, dining tables, chiffoniers, etc., and each of these smaller trades requires a special kind of labor, a special process of manufacture, specialized tools, specialized banks which know the credit needs of each trade, specialized shipping knowledge for packing and shipping furniture, etc.

Government regulation which seeks to control this specialized business must also be specialized. The War Industries Board had separate sections for each industry, and the Income Tax Division of the Treasury Department is similarly organized.

Thus modern business is a highly complex organism with interdependent parts. No one man, no one trade, no one section of country can live unto itself alone. Break it off with all the rest of the world and it will die. Each trade, each man, each section puts something into the pot out of which the world draws its sustenance and by putting something in each is entitled to take something out.

Science as a Saver

IN ITS October issue, THE NATION'S BUSINESS told something of our vast and growing chemical industry, of its vital importance as a key industry and its claim for government help. If there were need of proof of the value of the chemical engineer to every branch of business, a glance at the papers read before the American Chemical Society at its Chicago convention would furnish it. Here is a random selection of subjects discussed and results announced or forecast:

A method of treating bituminous coal to make a smokeless fuel with an increase in the production of tar and oils. It is described as "one solution of the large problem of the more economic use of our greatest natural resource, bituminous coal."

The substitution of glycerine of alcohol in making flavoring extracts. The supply of alcohol is uncertain, it is expensive and there is a sentiment against its use.

A fertilizer is being developed from tannery waste. The solution of sodium sulphide after being used to dissolve the hair from skins can be saved, converted into an odorless fertilizer with a high ammonia content and prevent river pollution.

New pain-killing drugs are being perfected which will not be habit-forming like opium and its derivatives.

Improved methods of handling phosgene, one of the poison gases of the war, make possible its use in the fight to keep down rats.

Potash, much needed by the farms of the country, can be turned out as a by-product in the making of cement from Illinois shale.

A process of "uninking" old magazines and books so that they may be remade into paper was described. Even old newspapers can be used again.

The progress in the American production of dyestuffs is marvelous, but perhaps that is all wasted. A South Carolina genius says he can grow cotton already dyed, and perhaps some animal Burbank will breed pink and blue sheep!



THE BIGNESS of LITTLE THINGS

Ever since that cow put out her foot and put a city in flames, Chicago has realized that little things count.

When it comes to merchandising, the entire mercantile field looks for, and stands by, the opinion of a Chicago establishment.

W. A. Wieboldt & Co., occupies 486,000 sq. ft. of floor space, employs 1500 sales people and has been synonymous with service for 36 years.

This concern realized that it's the little things that count and in 1915 adopted the *Sperry* Service, because it wanted to show an extra consideration to those who "pay as they go".

In 1920 the *S.A.* Green Stamp is a source of great satisfaction to the thousands of Wieboldt customers who come from "miles around" to share the benefits of this Standard American Discount.

THE SPERRY & HUTCHINSON CO.
114 FIFTH AVENUE NEW YORK

The Advertising Value of

CLEAN FLOORS

in American Business



One of the "Sunshine" Bakeries
of the
LOOSE-WILES BISCUIT COMPANY
Kansas City, Mo.
where CLEAN FLOORS help to
make CLEAN Sunshine Biscuit
and Vassar Chocolates.

"Our floors are CLEAN!"

What a world of meaning in these four words!

What confidence they inspire!

Is it a factory? Then surely the output must be CLEAN, since *even the floors* are CLEAN.

Is it a store? Merchandise, clerks, atmosphere, even the very selling methods must be CLEAN.

Is it a hotel? The suggestion of home-like comfort is a certain appeal to the refined.

Is it an office building? Certainly there could be no more reliable assurance

of all-around CLEAN service to tenants.

Many business men *think* they can truthfully say:

"Our floors are CLEAN!"

But mopping and scrubbing by hand do not guarantee cleanliness. They cannot be thorough.

Thousands of business men, however, *can* advertise their CLEAN FLOORS, for the Finnell System of Power Scrubbing is a positive guarantee of cleanliness.

Look for Finnell-scrubbed floors and you'll find *really* CLEAN FLOORS.

Free literature on request. Please address Chicago office.

AMERICAN SCRUBBING EQUIPMENT CO.

Also manufacturers of Finola Scouring Powder

General Offices: 182 N. Wabash Ave., Chicago

Factories: Hannibal, Mo.

DISTRICT OFFICES			
ATLANTA	BUFFALO	DENVER	LOS ANGELES
BALTIMORE	CHICAGO	DETROIT	LOUISVILLE
BOSTON	CINCINNATI	INDIANAPOLIS	MILWAUKEE
	CLEVELAND	KANSAS CITY	MINNEAPOLIS
			OMAHA
			PHILADELPHIA
			NEWARK
			NEW ORLEANS
			NEW YORK
			PROVIDENCE
			ST. LOUIS
			PITTSBURGH
			SAN FRANCISCO
			SEATTLE

FINNELL SYSTEM OF POWER SCRUBBING

FINNELL SCRUBBER



"CLEAN FLOORS
Reflect Clean Business"

**It
SCRUBS
Electrically!**



Mr. Charles M. Schwab says, "A band is more than an amusement and pride with the men; it makes work easier and it is a simple, pleasant method of increasing efficiency."

Encourage Your Men to Start a Band!

Hundreds of organizations have bands organized with the help of the management. Why? For the very good reason that a band improves *esprit de corps*. A band fuses interest, gives a rallying point for healthy enthusiasm and makes for the cheerful, loyal attitude that promotes efficiency and balks discontent.

What Other Concerns Are Doing

The employer who considers the pros and cons of a band is able nowadays to find ample evidence of its desirability—in the roster of organizations which have them. A few are: Erie Railroad Company, Sears, Roebuck & Co., Packard Motor Car Company, Bethlehem Steel Co., Standard Oil Company, Chicago Daily News, The Smet-Solvay Companies, Ford Motor Company, Oakland Motor Car Company, Chicago Elevated Railroads, Commonwealth Edison Co., Chicago Shipbuilding Company. There are hundreds of others.

Write for Information

The house of Lyon & Healy has equipped many bands. Valuable experience gleaned in this way is at your disposal. How to suggest the idea—estimates—easy payment plans—the instruments necessary—the selection of a band leader—mistakes to avoid—and other matters to be considered in starting a factory band have all been worked out. Consult your local dealer. If he does not handle Lyon & Healy band instruments, write to us and expert advice will be given, free, on how to start a band. Write us for free booklet, "How to Start a Factory Band."

Catalog of Band Instruments

We shall also be glad to send you, free, a Catalog of Band Instruments, picturing, describing and pricing band instruments and accessories. Lyon & Healy instruments are used by bands everywhere. The finest band instruments produced are the famous Lyon & Healy Own Make. Others, each best for the money, are the American Professional, Climax and Regimental.

63 to 69 Jackson Blvd.

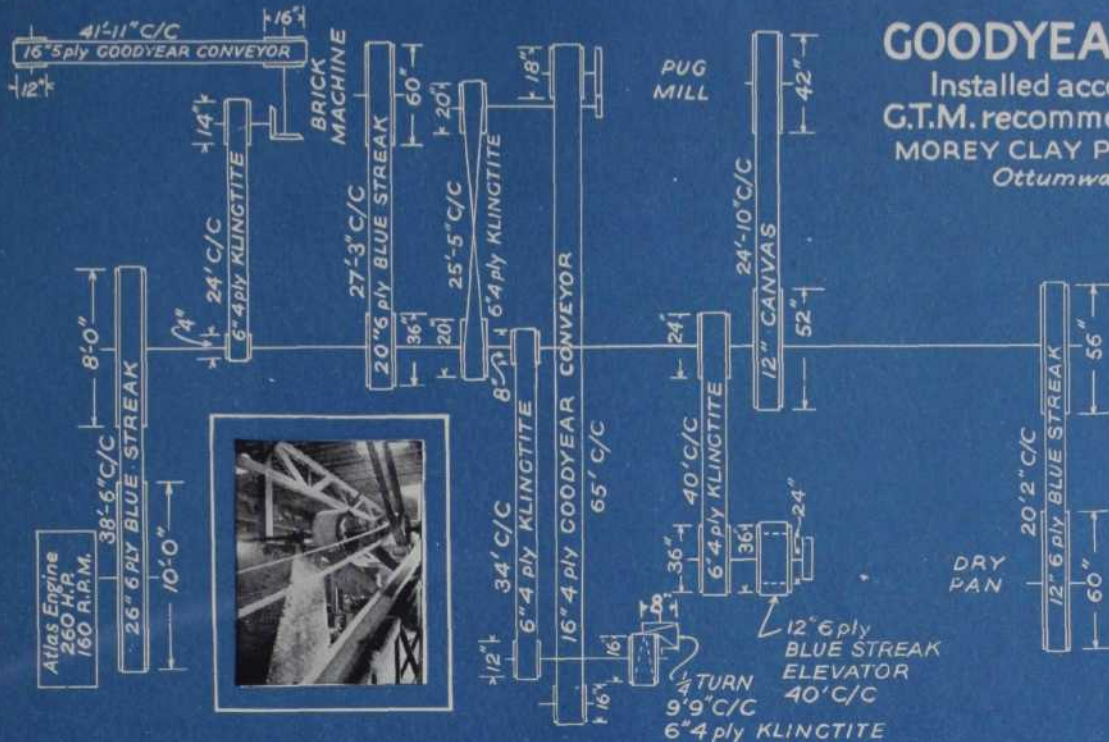


CHICAGO

LYON & HEALY Band Instruments

GOODYEAR BELTS

Installed according to
G.T.M. recommendation at—
MOREY CLAY PRODUCTS CO.
Ottumwa, Iowa.



Copyright 1920, by The Goodyear Tire & Rubber Co.

Eleven Out of Twelve Belts—and the G.T.M.

Belting an entire plant called into play the all-round expert knowledge of the G.T.M.—Goodyear Technical Man—for the Morey Clay Products Company, of Ottumwa, Iowa, when it rebuilt after the fire that destroyed its original factory in 1918.

The responsibility was as broad as the opportunity; for on the accuracy of the G.T.M.'s analysis depended the efficient relation of all the drive and conveyor processes, and thus, in large measure, the economy and profit of the Company's production.

Many kinds of belting had been used by the Company in its first plant, so the officials were able to give the G.T.M. much co-operation, in the form of data on operating conditions, from their earlier experience. Just one belt of the original equipment—that on the pug mill drive—had survived the fire intact, and the G.T.M. agreed that it should be used to the limit of its usefulness.

Eleven Goodyear Belts were installed on the recommendations made by the G.T.M. after his careful survey of the plant requirements. They are of different types, to perform different functions—a Goodyear Conveyor for carrying materials and products, Goodyear Klingtites on the smaller and

slower drives, Goodyear Blue Streaks on the intermediates, and a big, strong 26-inch, 6-ply Goodyear Blue Streak running like a top on the main drive from the engine to the line shaft. From least to greatest, they are Goodyear quality and Goodyear construction throughout—built to protect our good name.

Their performance is characterized by the superintendent as "excellent service." They are powerful. They require less attention. They give less trouble. And already they have to their credit records for longer life than the Company received from its best previous belting.

Your belting problem may involve a single drive or the complete equipping of a plant. In either case, the principle of the Goodyear Plant Analysis is the same. Its underlying object is the specification of the right belt to the particular duty required, so that it will perform efficiently, last a long time, and prove its genuine economy in its work for increased production at lower cost. For further information about this Plant Analysis and services of the G.T.M., write to The Goodyear Tire & Rubber Company at Akron, Ohio, or Los Angeles, California.

GOODYEAR



Autocars Speed Production



Chassis (1½-2 Ton)

\$2300 97-inch Wheelbase

\$2400 120-inch Wheelbase

The Autocar Motor Truck operates right inside big manufacturing plants. Its short wheelbase enables it to thread its way through places congested with machinery, and keep departments supplied with raw materials and material in process.

The Reading Iron Company use twenty-two Autocars. These Autocars keep the puddling furnaces constantly provided with fuel and raw material. They carry ashes to the dump. They take care of pick-up errands to and from freight yards and between plants.

They dump and take on loads within the limits of the plant. Yet no time is lost in maneuvering. Nowhere is rehandling necessary.

The short wheelbased Autocar is helping thousands of concerns in every line of business to meet the nation's need for increased industrial production.

THE AUTOCAR COMPANY, Ardmore, Pa. Established 1897

The Autocar Sales and Service Company

New York	Boston	Philadelphia	Pittsburgh	Chicago	San Francisco
Brooklyn	Providence	Camden	Baltimore	St. Louis	Sacramento
Bronx	Worcester	Allentown	Washington	Dallas	Oakland
Newark	New Haven	Wilmington	Richmond	Los Angeles	Stockton
Schenectady	Springfield	Atlantic City	Atlanta	San Diego	Fresno
					San José

Represented by these Factory Branches, with Dealers in other cities

Autocar

Wherever there's a road



Fourteen of the Reading Iron Company's Autocars. Quickly assembled for this photograph on a 27-foot raised roadway, and immediately returned to their duties afterwards.

NATIONAL CAPITAL PRESS, INC., WASHINGTON, D. C.